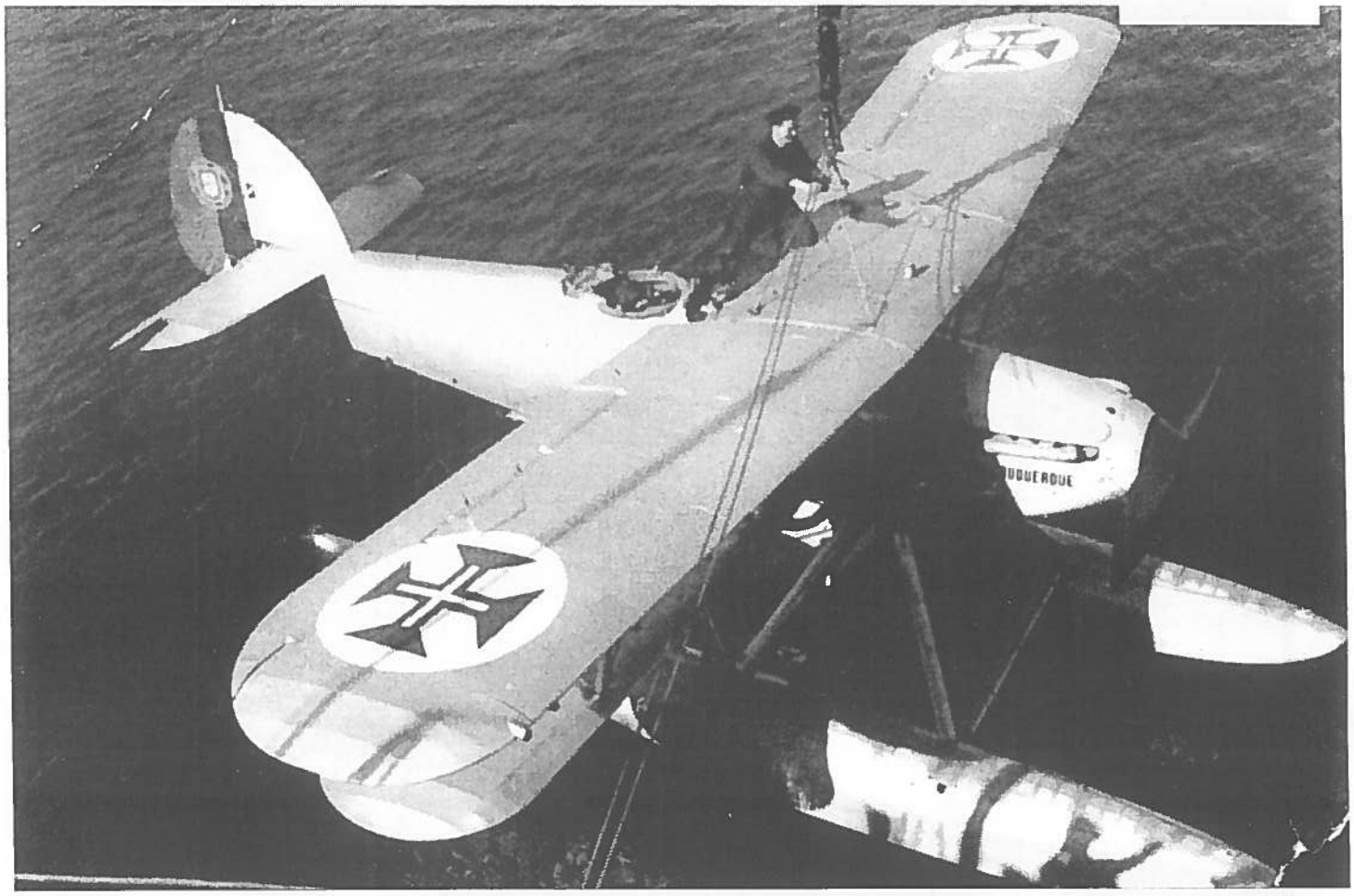
small air forces observer

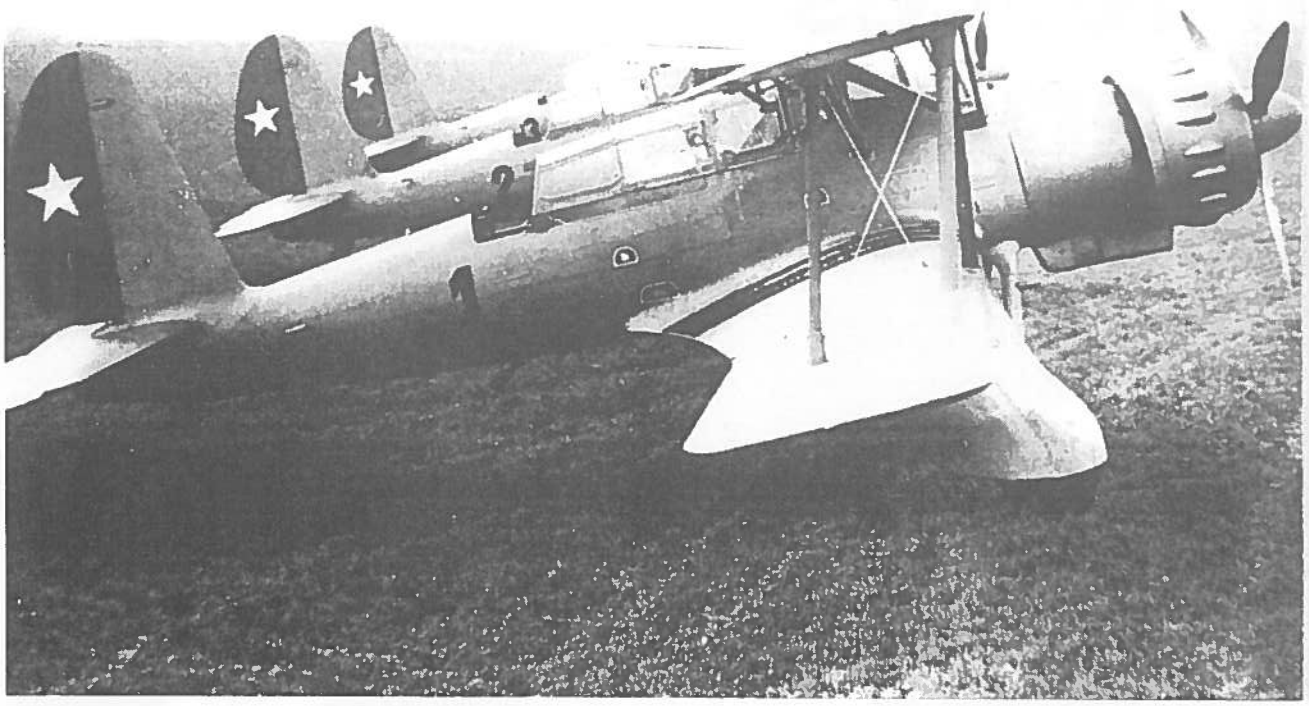
vol. 29 no. 4 (116)
April 2006

US $5.00

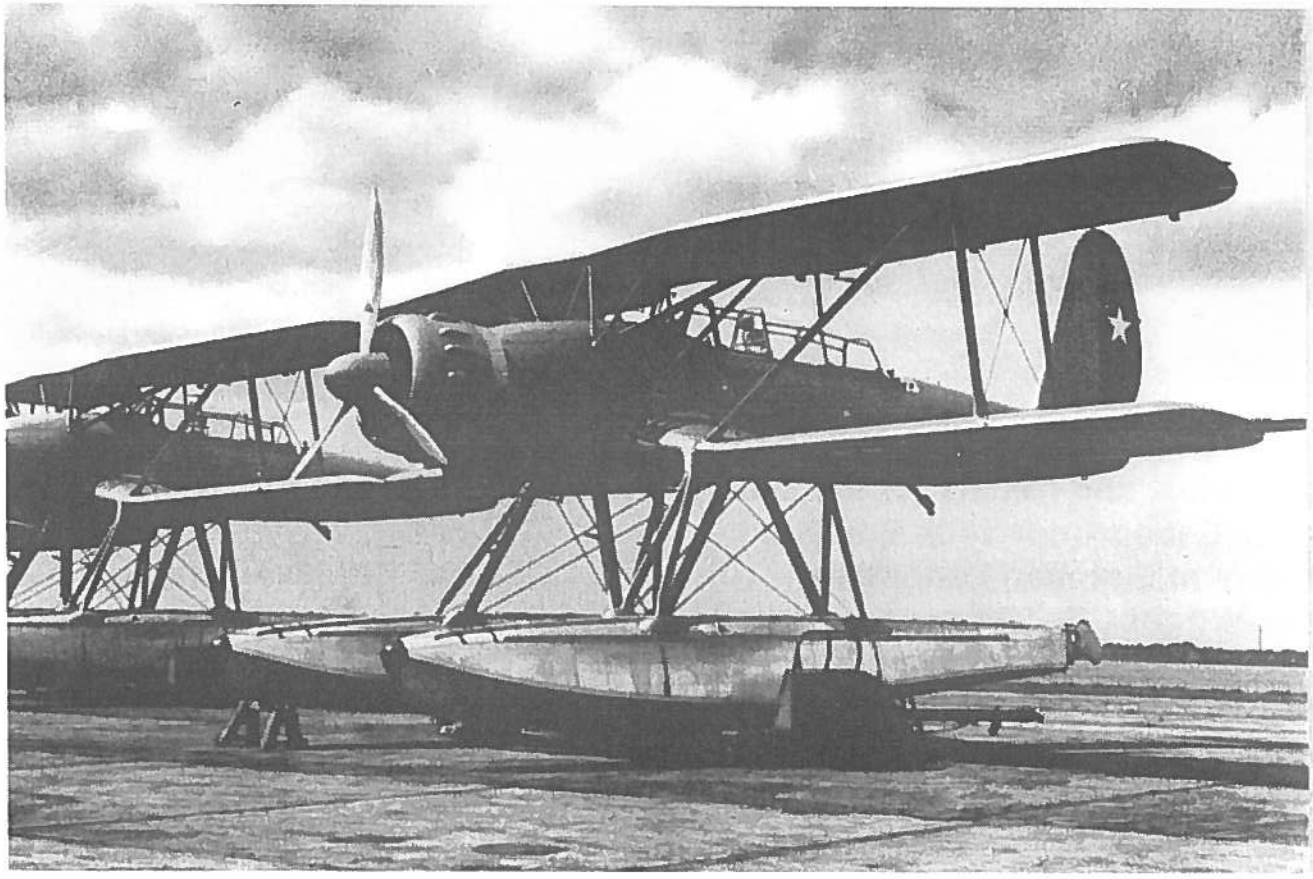


Kits, Profiles, and Decals for the Dutch Aircraft of Meidagen
Ljubjana Squadron Aviatik Berg D.I
Modeling an Egyptian Lancaster
Curtiss-Wright CW-16 Exports
Portuguese Hawker Osprey
Kuwait Air Force in Action
Kuwait Air Force Museum
Chilean Arado Ar 95

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A



B

SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

E-Mail: safo@redshift.com

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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

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LOST MEMBERS: Anyone knowing the whereabouts of the following 'lost' SAFCH members please inform the editorial office (last know address included): Alain La Pierre, Maracay, Venezuela; Jaroslaw Kusmirek, Lubartow, Poland; Jean Paul Castella, Marseille, France. Josef Gotz, Usti nad Labem, Czech Republic. Egils Pelecis, Riga, Latvia. Charles Berecz, Dayton, Ohio. Jean-Michel Guhl, Los Angeles, California. Masahiro Ohno, Japan. Mr. Scroggins, England. Przemyslaw Musialkowski, Warsaw, Poland;

SAFCH WEB SITE: See SAFO photos in color and chat with members at www.bartoli.com/safo

COVER PHOTO: Portuguese Hawker Osprey at Macau. See article on page 130. (photo via the author)

SAFCH SALES SERVICE: For the 4th consecutive issue, there was no room for the Sales List. There are still lots of great stuff left and almost all of it is on sale for 20% off. The complete list of sale items is available free via e-mail, or for $1.00 via snail mail.

SUBSCRIPTION RENEWAL: It's now time to renew your subscription for Vol 30 (July 2006 to April 2007). Because of the increase in postal rates it has been necessary to increase the subscription to $17.00 for surface mail. (Airmail rates vary by country. See renewal slip.) You'll find a renewal slip inserted in this issue. Please fill it out and return it as soon as possible so you won't miss the July issue.

Note for non-USA member receiving the issue via sea mail: You will most likely receive this issue too late to renew before the July issue is published. You have three choices: (1) Renew for airmail and the July issue will be sent to you immediately. (2) Add $3.00 and the July issue will be sent to you immediately via airmail with the remaining issues sent sea mail. (3) Renew at $17.00 and the July issue will be included with your October issue.

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"Could you ran this ad for me in SAFO, I am looking for decals for the Mexican Air Force Consolidated Vultee Catalina and for The DC-8 Panagra. Also need copies of photos for the Salvadorian Dassault Ouragan and Super Mystere French jet fighters of the fifties. Need also photo copies for the Honduran Northrop F-5E Tiger II, Thank you again."
Ron Ferreyra (SAFCH 482), 757 Emory St. #106, Imperial Beach, CA 92032, USA. E-Mail: allscalemodels@yahoo.com

"I would like to work up an article (or maybe a couple)_for SAFO on the Beech Super King Air. Please run the following in the next available issue:
"Needed: Material on small air forces use of the Beech Super King Air 200. Have photos for the following: Algeria, Argentine, Botswana, Cambodia, Colombia, Eire, France, Guyana, Guatemala, Hong Kong, Israel, Netherlands, New Zealand, Sweden, Thailand, Uruguay and Venezuela. Can use any information on other countries and more on most of those listed except Hong Kong. I won't cover United States and Great Britain in this article. Please let me know what you have, be it published or not, so that I can check to see if I already have it or not."
Tom Young (SAFCH #56), 38 Prince Royal Passage, Corte Madera, California, 94925. E-mail: maiesm72@netscape.com.

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A$40. International payment is best handled via Paypal at iansharyn@bigpond.com.au).

4-05 (36 pages) "RN FAA Firefly FR.1 in Korea" 1/3rd page with side-view drawing. "Spaniards on the Russian Front" one page including a side-view drawing (Bf 109F-4). "SA.321 Super Frelon Colours (Pt 2)" 5 pages with 6 side-view drawings [Malta, Iraq, Libya, China, & French (2)]. "Modelling from Photos" 8 pages of text and sketches. "Milne Bay P-40E: More on Kits, Decals and References" 2 pages of text. ""Gabonese Skyraiders" 2 pages including 3 side-view drawings.

AUSTRIA

OFH NACHRICHTEN (Oesterrichishe Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

4/05 (40 pages) "White Lightning fur Flying Bulls" 6 pages including 15 photos (one in color) of P-38 flying with the Red Bulls.. ""C-53 'Tullin'" 5 pages including 12 photos of 1946 crash of USAAF a/c in the Alps. " "Messerschmitt M 20" 5 pages including 6 photos of between-wars passenger a/c. " AVo 68 Samburo" 4 pages on Austrian-designed light a/c including 3 photos (one in color) and table of individual a/c. Color photos: Austrian F-5E and CM 170 Magister.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US $24.00 in US $26.00 elsewhere).

29/5 (24 pages) "Canadair Tutor Part One: Quick Build of the Tebuan" 11 pages on building the 1/48-scale Hobbycraft kit of the CL-41 in Malaysian markings including 24 photos of model under construction, and 5 b&w and 3 color photos of the completed model. "Building a 1/144th Olympic Airlines YS-11" 3 pages including 7 photos (3 of the completed model in color). "The Canuck Files: Farewell To Arms – The Leopard C1" 6 pages with 10 photos.

DENMARK

NYT (IPMS Denmark, c/o Lars Seifert-Thorsen, Guldregnvej 4, 4600 Koge. 4 issues for 240 DKr). Web: www.ipms.dk

#107 (40 pages) ""Douglas C-54D Skymaster: I tjeneste I Det Kongelige Danske Flyvevaben" 9 pages including 10 photos (one in color) of a/c in Danish AF markings. "Den smilendde unge mand pa vingen af 'SKAGEN' Ind" 2 pages including 3 photos.

#108 (40 pages) "Hawkers Stormvinde" 5 pages on building a model of the Typhoon including 7 photos. "Historien om verdens forste luft-til-jord missil" 3 pages including 5 photos of the 'Bat' and its PB4Y mother ship. "De forste RAF VC 12. Verdenskrig" 4 pages including 6 photos and a side-view drawing of RAF Fairey Battles. A color photo of a 1/72-scale KZ-IIT built from a resin kit from Stokit (alias Jacob Stoppel).

ENGLAND

THE CATALINA NEWS (Val Thomas, The Catalina Society, Duxford Airfield, Cambs, CB2 3QR, England. One year £15. Web Site: www.catalina.org.uk.

#61 January 2006 (24 pages) Nothing of small-air-force interest, but a good "read" cover to cover. "2005 Season Report" 7 pages on the activities of the Society's PBY including 11 photos. "Squadron Veterans" a very interesting 3-page story about WWII Cats flying long mission to support coast watchers deep inside Japanese occupied territory with "the weather causing more losses than the enemy". "Totem Air Service Inc. and their Catalina" 3 pages on a one-Cat airline serving Alaska shortly after the end of WWII.

MUSHROOM MODEL MAGAZINE (Roger Wallsgrove, 36 Ver Road, Redbourn, Herts AL3 7PE, UK. £3.95 each.. Each issue has 8 pages of color. (North American subscription agent: Wise Owl Publications, 5150 Candlewood St , Suite #1, Lakewood, CA 90712-1900. $32.00. E-mail: info@wiseowlmagazines.com.

10/2 (28 pages) "A Web-Footed C-47" 3 pages on using the RVHP conversion kit to make a float-version of the C-37, includes 8 photos of completed model and real thing; includes a description of build the jig to align the floats. [Editor: I had the read this several times before I could understand the procedure. A diagram or photo of the jig would have been helpful.] "Hasegawa Spitfire Mk IXc with CMK Merlin Engine" one page including 3 photos of the completed model. "Schneider CA-1" 2 pages with 9 photos (2 of the real thing) and a 3-view 1/72-scale drawing. [Editor: Before you go crazy looking for this in your aircraft files, this is a WWI tank used in the Spanish Civil War. But, what scratch build could resist this funky creepy crawler?] "In Tune with the Smer Avro 504K" one page on building the 1/48-scale kit with exposed fuselage structure; includes 4 photos of the finished model. "Bell J-47G of the Malta Land Forces"a 2-page feast for the small-air-force enthusiast with history, tips on building the MPM 1/72-scale kit, and 5 photos of the real thing. "ESCI 1/72 F-4E Phantom" 2 pages including 11 photos. "One Day my Prince will Come" 4 pages on building the Special Hobby 1/72-scale Hunting Percival Pembroke, includes 10 photos of the real thing. [Editor: The title, the title of a song from Walt Disney's "Snow White", refers to the author's wish for a kit of the similar Prince.] "The Junkers G38 & Ki-10" 3 pages on building a couple of the 1/144-scale Revell kits; includes `3 photos of the real things and 13 photos of conversion to the Japanese Ki-10. "Hot off the Work Bench" 5 pages of reviews of 6 kits; the most exciting for small-air-force enthusiasts is the 1/72-scale resin CMR kit of the Avia BH-33E with decals for Czech, Yugoslav, Croatian, and Greek a/c. "Book Reviews" one page with reviews of 3 books. [Editor: Although not spelled out in detail above, each article includes color photos of the completed model and of the real thing (when available.]

FINLAND

FINNISH AIR FORCE SIG, c/o Nils R. Treichel, Gustav-Adolf-Str.16, 27404 Zeven, Germany. Entirely in English.

No. 23 (10 pages) "Delta Discussions" 2 pages on Finnish MiG-21 including a multi-view scale drawings of 'MG-34'. "Lone Raider" 2 pages on the sole Finnish He 115 including side-view drawing and sketches of exterior and interior details.

IPMS-MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues $20.00, no check accepted due to the high redemption costs). Text in Finnish.

#160 5/2005 (28 pages) "Hawker Hurricane" review of the 1/72-scale Revell kit including 10 photos of museum a/c and 5 sketches of interior detail. "Varsovaa mallatin silmin" 4 pages including 16 photos of a/c and other equipment on display at the Warsaw's outdoor miliary museum. "Brewster B-239 Suomi-malli 1/72 Revell 04379" one-page kit review including 2 photos of museum a/c.

SUOMEN ILMAILUHISTORIALLINEN LEHTI (Pentti Manninen, Jakomaentie 8 b C 300, 00770 Helsinki. Subscription: Europe 26 euro, elsewhere 32 euro or 38 USD. Payment by International Postal Order or in cash notes; no cheques accepted because of high redemption rates). Each issue includes a 2-page English summary.

4/2005 (24 pages) "Performance of Piston-Engine Fighters: Part 7" 4 pages including 4 photos. "Final Flight of Heinkel He 111 T9+CK on 25.5.1943" 6 pages including 3 photos and a side-view drawing. "Mraz M1C and M1D in Finland" 6 pages including 8 photos and a scale 3-view drawing. "Finnish Pilot Training in Sweden 1940" 3 pages including 4 photos (Swedish Kl 35B & Gotaverken GV-38). "Two Surplus IVL A.22 Hansa: Aircraft Sales to Latvia by Finnish Air Corps in 1926" 3 pages including 2 photos and a multi-view scale of 4G.100 in Finnish and in Latvian markings.

FRANCE

AIR MAGAZINE, TMA, 75 rue Claude Decaen, 75012 Paris, France. Six issues a year. 35 euros in France, 41 euros in Europe, and 50 euros for the rest of the world. Payment by Visa, Eurocard, Mastercard. E-mail: airmagazine@wanadoo.fr.

N° 29 Dec. 2005/Janvier 2006 (74 pages) "Le Bombi: Bombardier Argentin" 10 pages on the Argentine-designed Ae.M.B.2 single-engine monoplane bomber including 24 photos, 4 color side-view drawings, and color top- and bottom-view drawings. "Mission Cartographique, Perdue dans les Sables d'Afrique" 4 pages including 8 photos (Farman Goliath). "Vultee Vengeance" 34 pages including 55 photos, a 2-page multi-view 1/72-scale drawing, 9 color side-view drawings [USAAC (2), Indian AF, RN, RAAF (2), RAF, Brazilian AF, & French AF], and 9 color multi-view drawings [RN, RAAF (2), USAAC,(2), RAF, Brazilian AF, French AF (2)]. "Spitfire LF.XVI au N°341 Squadron 'Alsace'" 10 pages including histories of individual a/c, 21 photos, and 7 color side-view drawings [two a/c (TB137 & TB252) are shown in 3 color schemes (RAF, French AF, & Belgian AF, and TD153 in French AF markings]. "Actualite Maquettes & Livres" 3 pages of reviews (21 kits and 3 books).

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues).

#149 Janvier/Fevrier 2006 (72 pages) ""Rogozarski IK-3, le 'D.520' yougoslave" 17 pages including 21 photos, 3 pages of scale drawings, color cover painting, 4 color side-view drawings, and 3 color 3-view drawings. "Eurasia, des vols pioniers dans un pays dangereux" 8 pages on early airline in China including 17 photos (F 13, W 33, & Ju 52/3m) and one map. "Coup d'oeil a aviation navale induenne" 8 pages on the current Indian naval aviation including 25 photos (Harrier, Tu-142, Ka-28, Il-38, Do 228, and HAL Dhruv, Chetak, & Kiran). " PZL.50: des questions et des reponses" 2 pages including 6 photos. "14-18:quand la France inventait le tir a travers l'helice" 11 pages on French designs for firing through the propeller, including 7 photos, 4 color side-view drawings [MS Parasol, MS type N (2), & MS type G], and numerous sketches "Pioniers: les 'machines a voler' de Paulhan" 2

pages including 3 photos and a small 3-view drawing. "PBN ey PBY, les derniers Catalina sovietiques" 6 pages including 11 photoa and 5 color side-view drawings. "Monographie: Le Dornier Do D" 7 pages on the Yugoslav floatplane including 15 photos and a page of scale drawings and a color 2-view drawing. "Info maquettes et loisirs" 3 pages of reviews (15 books and 5 kits).

GERMANY

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

3/2005 (44 pages) 'Nothing of small-air-force interest.

ITALY

AERO FAN Storia di Italiane. English summary. (Giorgio Apostolo Editore, Via Ampere 49, 20131 Milano, Italy.) 4 issues €52.00. Payment by eurocheque, credit card (Visa/Mastercard), or Bank remittance (in latter case add €3.00). Each issue contains a multi-page English translation,

#94 Lug.-Sett. 2005 (68 pages) "The Venice Esquadrille" 26-page story of the French squadron that few in defense of Venice during WWI, including 35 photos and 23 color side-view drawings of French Nieuports and Spads. "Fiat G,2: Gabrielli's First Trimotor" 6 pages including 11 photos and a 3-view drawing. "Ermanno Bazzocchi: A Life for Aviation" 12 pages including 18 photos (6 of his 1944 EB-4 canard) and drawings of 6 of his unbuilt projects. "MB 308 on the Argentine Pampas" 5 pages on an Italian light-plane license-built in Argentina including 7 photos and a table listing individual aircraft.

#95 Ott.-Dic 2005 (68 pages) "Pilots an Fighters of the ANR" 27 pages with "never-before published" photos of the pilots and aircraft (Bf 109 & G.55) of the *Aeronautica Nationale Repubblicana* units in Northern Italy. "The CANT Z.1012 Trimotor" 8 pages on a tiny trimotor trainer including 12 photos and a 3.-view scale drawing. "The Story of a Vanished Swordfish" 9 pages (plus 4-pages English translation) including 7 photos on the research into events surrounding an encounter between the Italian and British fleet off Calabria in 1940. "Libre & Riviste" 3-pages of reviews of 16 books.

JP-4 Mensile di Aeronautica (JP-4, Via XX Settembre 60, 50129 Firenze; L 27.000 Europe, L 30.000 elsewhere).

Ottobre 2005 (98 pages) Color photos: Kuwaiti AH-64D Apache Longbow and Omani F-16D. "Veterani & Musei" one page with 3 photos (Yugoslav F-86D, F-84 G, & Soko 522). "Aviazione Giordana" 4 pages including 7 photos (F-16, F-5, EC 635, Mirage F1EJ, Slingsby T-67 Firefly, CASA 101, & AH-1 Cobra). "Incidenti: Militari" one page including 2 photos.

Novembre 2005 (98 pages) Color photos: Algerian Beechcraft 1900D; New Zealand MB.339; & Thai L-39. "Anatolian Eagle" 2 pages with 7 photos (Turkish F-4 & F-16). "La Cabeza de Indio" 4-pge story of an Argentine pilot who flew fighters with the French I WWI including 10 photos.

Gennaio 2006 (98 pages) Color photos: Mexican CASA C-212, SAAF Saab Gripen, & Dutch KDC-10. "Seoul Airshow 2005" 3 pages with 10 photos (KAI T-50, F-15K, Ka-32T, BeA 748, KAI KO-1, A-37B, Il-133, UH-60P, P-3C, & C-130H). "Incidenti: Militari" 2 pages including 8 photos (Jordan CASA C-101, Poland TS-11, Taiwan S-70CM, & Denmark F-16A 'E-609').

Febbraio 2006 (98 pages) "CF-18: Le allodole di Bagotville" 6 pages including 13 photos of Canadian CF-18, "Incienti: Militari" one pages including 4 photos (Paraguay T-23 Uirapuru, Poland An-2; Japan OH-6D; & Mexico Robinson R44).

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, c/o Luuk Boerman, Kerkstraat 2, 2471 AP Zwammerdam. E-mail: lucasb@normadblend.nl.

4/2005 (36 pages) "De Blackburn Firebrand van Magna Models" 8 pages on building the 1/48-scale kit including 9 color photos of the model. "Het weifeelende draakje: The Reluctant Dragon" 4 pages on building two 1/72-scale Sword kit of the Seagull/Seamew including 12 color photos of the models (USN on float and FAA on wheels). "Euro Scale Modelling 2005" 13 pages with 55 color photos of the winning models.

POLAND

LOTNICTWO (Krzystop Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl.)

9/05 Wrzesien (68 pages) Color photos: Omani F-16 & Saudi BAe Hawk. "Pluton Lacznikowy nr 3: Lotnictwa Armii Krakow – wrzesien 1939r" 4-page day-by-day account of combat; includes 4 photos (RWD-8). "Samoloty dla polskiego lotnictwa mysliwskiego w latach 1926-1939 (cz. IV)" 8 pages including 7 photos (one of the PZL-50 that is new to this reviewer) and 3 color side-view drawings (P-7a, P-11a, & P-11c). "Encyklopedia Lotnicza" one page each on the Fokker G.1 and Koolhoven FK.58 including 2 photos of each.

10/05 Pazdzierkik (68 pages) "Szachownice nad Irakiem" 4 pages on Polish helicopters in Iraq including 9 photos. "Wprowadzenie samolotow odrzutowych MiG-15 do szkolenia w OSL-4 Debin" 6 pages including 10 photos and 2 color side-view drawings (Polish Lim-1 & UTMiG-15). "Bloch MB 152 z Dyonu 1/145 w kolorze!" 2 pages including 5 color photos. –"Ostatnia wojna dwuplatowcow (cz.1)" 6 pages n WWII air action in East Africa including 21 photos and 4 color side-view drawings (Vincent, Wellesley, Gladiator, & CR.32). "Encyklopedia Lotnicza" 2 pages including 2 photos each (Avia B-534 & B-35/135).

11/05 (68 pages) "Sily powietrzne Slowacjii I Wegier w 2005 r." 5 pages on the current status of the Slovak and Hungarian AFs including 10 photos [Slovakia: MiG-29, L-39, Mi-2, L-410, & Mi-17. Hungary: MiG-29, Gripen, An-26, Mi-24 & L-39]. "Polskie smiglowce nad Afryka (cz.IV)" 4 pages including 5 photos and a color side-view drawing (Mi-8). "Samoloty smiglowce Instytutu Lotnictwa: Pierwsze lata posojenne" 4 pages including 11 photos [Junak, Zuraw, Szpak, Bu 181, Mis, CCS-12, Pe-2, Cub (4)]. –"Ostatnia wojna dwuplatowcow (cz.II)" 4 pages n WWII air action in East Africa including 7 photos and 2 color side-view drawings (Gladiator, & Hurricane).. "Wprowadzenie samolotow odrzutowych MiG-15 do szkolenia w OSL-4 Debin (cz.II)" 3 pages including 5 photos and a color side-view drawing (Polish UTMiG-15). "Encyklopedia Lotnicza" 2 pages including 2 photos each of IAT-80 and IAR-81.

SPAIN

REVISTA ESPANOLA DE HISTORIA MILITAR (Carlos Fresno Crespo, Alcaniz Fresno's S.A., C/Cromo 18-20, Poligono Industrial San Cristobal, 47012 Valladolid) €6.90.

#64 Octubre 2005 (58 pages) "U-Boote en Espana (1936-1938)" 6 pages including 4 photos and a color side-view drawing. "Un Lockheed Hudson en Santa Pola" 6 pages on recovering a Hudson from the sea off the Spanish coast including 7 photos and a color side-view drawing.

Booklet Insert: Operaciones acorazadas de la Segunda Guerra Mundial (pages 121-140). "Prokorovka 1943" 16 photos, 13 color side-view drawings of Russian and German armor, and a color 4-view drawings (T-34).

Booklet Insert: "Carros de Combate y vehiculos de cadenas del Ejercito Espanol. Un Siglo de historia" (pages 225-240). "Guerra Civil (1936-1939) 26 photos, 5 color side-view drawings, and a color 4-view drawing (T-26).

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues $42.00 USA or $47.00 overseas).

#191 Feb 2006 (144 pages) Aeroplane Gastambide-Mengin" 11 pages including 17 photos. "The Curtiss OX-5" 7 pages including 3 photos and a multi-view scale drawing. "The Gallaudet Story: Part 13" 4 pages. "The Rhonie Aviation Fresco: Part 2" 9 pages including 9 photos. "Film" 6 pages including 12 photos of a/c used in the upcoming film *Flyboys*. "Drawings" 4 pages – 4 a/c. "Mikael Carlson's Aircraft Collection" 7 pages including 10 photos [Bleriot (Thulin) XI and Tummelisa]. "Models" 11 pages including 61(!) photos. "The Mystery of Farnborough's Experimental Model Monoplane" 2 pages including a scale 3-view drawing. "Letters' 4 pages. "Publications" 14 pages.

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues $42.00 USA or $47.00 overseas.).

#77 Jan.2006 (80 pages) "The Straughan-Wiley Post Model A" 10 pages including 12 photos and a scale 3-view drawing. "US Army Single-Engine Attack Aircraft Development from 1926 to 1940" 16 pages including 30 photos, a scale 3-view drawing (Northrop XA-16), and 4 side-view drawings (Northrop Gamma 2C, YA-13, XA-16, & A-17A). "Stinson Model A Trimotor Airliner: Part 3" 7 pages including 6 photos and 4 "Sketch Pages" with color schemes. "Blakesburg and Brodhead Fly-Ins" 3 pages with 8 photos. "Aviation Movie Publicity Stills: Jenny, Queen of the Celluloid Skies" 7 pages with 14 photos. "Cockpits: Fokker F.VI/PW-5 Pursuit" 3 pages with 6 photos, "Casting Out Demons: The Truth About Curtis-Wright's Model 21 Interceptor-Fighter" 2 pages including 2 photos. "ID UNK: Identification Unknown" 5 pages including 7 photos and 2 scale 3-view drawings (Collier Ambassador & Mercury Chic). "Skyways in Miniature" 4 pages on using parts from different plastic kits to build models of unusual aircraft; includes 10 photos of completed models (Sikorsky XOSS-2, Bellanca XSE-2, Kellett YG-1A, Brewster XSBA-1, Fokker Y1C-15, Curtiss XF13C-1, Consolidated XBY-1, Curtiss Y10-40B, Lockheed Y1C-24, & Grumman JF). "Models" 3 pages including 4 photos. "Skyways Reviews" 2 pages (4 books, 9 magazines, & 2 catalogs).

ESM 72 (Model-Aire International, 38 Prince Royal Passage, Corte Madera, CA 94925. E-mail: maiesm72@aol.com. Web site: members.aol/Maiesm721/maiwebpg.html.)

Quarterly. $25.00 for four-issue volume. $30.00 outside the USA. Back issues available at same price per volume.

Vol. 9, No. 1 (pages 1-56) "Aircraft by Kit Manufacturer" 18 pages S.A. Models to Sword" and the usual "Updates".

Kuwait Air Force: 2 August 1990 to 28 February 1991

Santiago A. Flores

[Author's Note: A number of books and articles have been published about the air combat during Persian Gulf War 1990-1991, but many fail to mention the role the Kuwait Air Force "Al Quwwat al Jawwija al Kuwaitiya" it played in the defense of its homeland and in its liberation. Many people don't know that Kuwait fighter pilots scored aerial victories flying their Mirage and Skyhawk aircraft. Western sources usually mention that only U.S. pilots and a Saudi pilot scored aerial victories during, the Persian Gulf War. Before going to Kuwait on "personal trips" courtesy of the U.S. Army, I only knew that two USAF pilots were the top scorers of the conflict: Capt. Thomas N. Dietz of the 53TFS/36TFW was credited with 3 aerial victories (2 MIG-21 and 1 SU-22) while flying the F-15C Eagle, and squadron mate Lt. Robert W. Hehmann was also credited with 3 aerial victories (2 SU-25 and 1 PC-9). Capt. Ayed Salah Al-Shamarani of No.13 Squadron Royal Saudi Air Force, shot-down 2 Iraqi Mirage F-1 fighter-bombers while flying the F-15C fighter. But new research has now uncover that a Kuwait pilot claimed the destruction of 3 Iraqi helicopters during the morning of the invasion of Kuwait - a fact, not well known in the west. Not only did Kuwait pilots score against the Iraqi Air Force, but also against the Hawk Air Defense Missile batteries and SAM-7 "Strella" shoulder-launched ground to air missiles. I hope that the following information will be helpful to understand what happened on the Kuwait side of the war and the role its air force played.]

Kuwait Air Force or Al Quwwat Al Jawwiya Kuwaitiya

Before the war the Kuwait Air Force was under the Command of Brigadier (later Major General) Dawood S. Al-Ghanim (commanded the air force from 1986-1992). Under him the Air Force consisted of the following:

3 Air Bases
12 Squadrons
71 Fixed Wing Aircraft (Fighters, Jet Trainers and Transports)
40 Rotary Wing Aircraft (transport, attack helicopters)

As noted in the book "Days of Fear", the KAF had the following secondary aircraft and air defense systems that formed part of the inventory:

> "The KAF also had 16 Puma and Super Puma heavy helicopters and 20 Gazelle light anti-tank helicopters armed with TOW missiles, all at Ali Al-Salem. The four Hercules C-130 transports and two DC-9 executive jets were at the International Airport. Ground base air defense comprised of four batteries of US improved HAWK missiles, and shoulder fired anti-aircraft missiles. At the time of the invasion, the Hawk's had one battery on Failaka Island, a second near Ahmadi, a third south of Ras Al-Jalayh and one near Mutla's."

Before the war some western observers had give the following assessment of the capabilities of some of the combat aircraft of the KAF as follows:

> ".....Mirage F-1 aircraft proved hard to maintain however and Kuwait lost several of these aircraft in accidents. The radar of the Mirage F-1 had.reliability problems and its 55-kilometer air intercept range proved to short to meet Kuwaitis operational needs. As a result Kuwait was force to use its A-4 attack aircraft in a combat air defense screen. Further Kuwait was so short of air force personnel that it contracted for Pakistani service and support crews."
>
> "Kuwaiti training was adequate for interdiction and close air support missions against targets that lacked good ground base air defense but was not suited for attack on Iraqi forces. Kuwaiti pilots also had relatively limited air-to-air combat training, and were severely hampered by an inadequate air command and control system, and air warning surveillance coverage. Little effort was made to develop a force that could maintain a high alert status or work with the army in effective combined operations. The Mirage F-1 did however maintain a limited alert status during the Iran-Iraq war."
>
> "The A-4 was adequate attack aircraft, but did not have air combat radar. They could only be used in dogfights where ground base radars on Kuwait Mirage F-1 guided them to a target. This mode them hopelessly inferior to Iraq's modern fighters in air to air combat capability"
>
> "Helo Crews had moderate training and good foreign maintenance personnel."

Some of these assessments were to be challenge during the actual invasion of Kuwait and the numbers speak for themselves.

Air Order of Battle of the KAF

The Air Force units were assigned to the following Air Bases on the Morning of 2 August 1990

Ahmed Al-Jaber Air Force Base:

No.9 and No.25 Squadrons: 30 MacDonald Douglas A-4 KU Skyhawks fighter bombers
No.12 Squadron: 12 BAe Hawks Mk.64 jet trainers

Ali Al-Salem Air Force Base: Base commander Col. Saber Al-Swaidan: Hq KAF

No.18 and No.61 Squadrons: 23 Dassault Mirage F-1CK-2 and BK-2 fighters
No.31 and No.32 Squadron: 16 SA.330H Puma and Super Puma helicopters
No.33 and No.34 Squadrons: 20 SA.342L Gazelle light armed helicopters
No.64 Squadron: 4 AS.532SC Cougar transport helicopters

Kuwait International Airport

No.41 Squadron: 4 Lockheed L-100-30 Hercules Transport aircraft
No.42 Squadron: 2 Douglas DC-9-32 executive Jets

The Aircraft

The following aircraft types were involved in the defense of Kuwait and later in its liberation.

Dassault Mirage F.1CK/CK-2 and F.1BK/CK-2 fighters. These French-made-fighter were assigned to the following KAF units:

Kuwait Fighter Squadrons No.18 and No.61: Dassault Mirage F-1CK/CK-2 and F.1BK/BK-2. Known delivery of these aircraft were: 18 Dassault Mirage F.1CK and 2 F.1BK ordered in 1974; 13 Dassault Mirage F.1CK-2 and 4 F.1BK-2 ordered in 1983. Know KAF serial numbers: First batch were serials KAF 701-718; second batch was serials KAF 719-727. Another source report that the KAF numbers were: Dassault Mirage F.1CK KAF 701-727; Dassault Mirage F.1BK KAF 771-776.

On 2 August 1990: the KAF reportedly had 25 Mirage F.1 available for service. Its been reported in a aviation magazine that 14 aircraft flew to Saudi Arabia, but before they retired to Saudi Arabia they managed to shoot down 2 Su-22, 1 MIG-23 and 2 Mi-24 helicopters all using the R.550 Matric Magic AAM. (Not confirmed in any Kuwaiti source). In the book "Days of Fear" it is mentioned that the reaction of the KAF Mirage fleet to the incoming Iraqi raids:

> "In the meantime the KAF had been in action. At 3:45 a.m., the Air Operations Center advised Ali-Al-Salem of incoming aircraft – about 70 helicopters, heading for the base and Kuwait City. The base Commander, Colonel Saber Al-Suwaidan, scrambled four of his Mirage interceptors at 3:55 a.m. each armed with two MAGIC-1 missiles and 30 mm cannon. The pilots, Capt. Mohammed Al-Dossari, and Lieutenants Habis Al-Mutairi, Abdullah Suwailim and Ali Al-Anzi, each shot down two helicopters with their Magic's. Another two Mirage were launched an hour later. Major Taher Al-Taher in one shot down two helicopters with his missiles - one of which was trying to jam the HAWK missile radars on Failaka Island - and then a third with his 30 mm cannon. His colleague, Lieutenant Bassam Al-Jouaid, got one."
>
> "The Iraqis were not long in retaliating, as the sky lightened, they attacked all three KAF bases simultaneously at 5.25 a.m., with about six aircraft each, using Sukhoi bombers escorted by their own Mirages, hitting the runways, taxiways and the lubrication shop at Ali Al-Haiman. It was a well-coordinated attack. Another aircraft hit the Umm Al-Haiman telephone exchange to disrupt communications with the Ras Al-Jalayh Naval base further south, putting a bomb in the precise room needed to knock it out."
>
> "At the same time, Ali-Salem had several aircraft aloft. They were ordered to divert to Al-Jaber base, or the Al-Adamy Border station with Saudi Arabia. When the Mirages arrived over Al Jaber, they found that it had been bombed. Air dropped mines were scattered all over the runway. Clearance crews were unavailable to deal with them, and the Mirages had insufficient fuel to reach Saudi Arabia safely."
>
> "The pilots were faced with attempting a suicidal landing on bombed runways, or ejecting and abandoning their aircraft, when someone suggested that they tried a security road which ran inside the perimeter fence of the base. The road was 2,700 meters long and 4.5 meters wide, hardly enough for two cars to pass side by side, but just wide enough for a Mirage undercarriage. The pilots brought their aircraft in safely, and ground crews rushed out to retrieve the pilots and refuel the aircraft."
>
> "This incident proved to be particularly significant in the defense of Kuwait. At the time the commanders of Al-Jaber base though that they would be unable to operate their A-4's from damaged and mined runways, but now using the road, they would be able to fight."
>
> "The Mirages- most of which were still at Ali-Al-Salem- were not out of the flight yet. Two more took off at 6.30 a.m. from the undamaged parts of the runway, shooting down two Iraqi helicopters before flying to Al-Jaber and landing on the perimeter road to refuel. Over the next three hours, all but eight of the 23 Mirages managed to take off for Saudi Arabia. One of these shot down an Iraqi helicopter to bring the total for the Mirages for the morning to 15."

Eleven aircraft (6 F.1CK/CK-2 and 5 F.1BK/BK-2) were captured by the Iraqi Army. The survivors were deployed in Saudi Arabia and they flew 634 missions (700 hours) of which 128 missions were flown during Desert Storm (200 hours). After the war the Iraqi handed back F.1CK No.703, 706 and 727 in bad conditions, while the other 5 two-seaters and the 3 F.1CK/CK-2 were not given back (Iraq claimed they were destroyed, but probably were incorporated to their battered Mirage fleet.).

Known Aircraft Victories Claimed by KAF Pilots on the Morning of 2 August 1990:

Sixteen confirmed Iraqi aircraft shot-down by the F.1 KAF pilots and recognized by the KAF officials and the KAF aviation museum:

Take off time at 3.55 am:

- Capt. Mohammed Al-Dossari: 2 Iraqi helicopters (Matric Magic-1 missiles)
- Lt. Habis Al-Mutairi: 2 Iraqi helicopters (Matric Magic-1 missiles)
- Lt. Abdullah Suwaillin: 2 Iraqi helicopters (Matric Magic-1 missiles)
- Lt. Ali Al-Anzi: 2 Iraqi helicopters (Matric Magic-1 missiles)

Take off time at 4.55 am:

- Major. Taher Al-Taher: 3 Iraqi helicopters (2 kills with Matric Magic-1 missiles and one 30-mm gun fire)
- Lt. Bassam Al-Jouaid: 1 or 2 Iraqi helicopters (missiles or gun fire?)

Take off time at 6.30am:

- Capt. Ayman Al-Mudaf: 2 Iraqi helicopters (Missiles or gun fire)
- Lt. Faisal Al-Hamoud: 1 Iraqi helicopter (probably after 0900 hours) (missiles or gun fire?)

An Internet source credits the KAF Mirage F.1CK/CK-2 with one MIG-21 kill with a R.550 Matric Missile and an IL-76 transport plane. (Not Confirmed by Kuwaiti sources) Also, it appears that all "Helo" kills were probably Mi-8 to include possibly Mi-25 Hind attack helicopters. But what factor had favored the Kuwaiti pilots that led to the shooting down of so many helicopters in the first place as noted by aviation historian Tom Cooper in article about the Iraqi Invasion of Kuwait, 1990:

> "The Kuwaiti air defense units were actually the first to react: at dawn as a large formation of over 50 Iraqi Army Air Corp (IrAAC) commando-carrying Mi-8's escorted by Mi-25 and Bo.105, approached Kuwait City, at least two MIM-23B Improved Hawk SAM-batteries went into action. Not equipped with RWR's the Iraqi helicopters were easy prey for the Kuwaiti missiles. Within just few

minutes, no less but 14 Mi-8's and Mi-25's were chopped out of the skies. The losses of the Iraqi Special Forces were extensive, and the plans for the swift capture of the Kuwaiti royal family was immediately spoiled……."

"With the surprising appearance of numerous Kuwaiti fighters at low level, and their own fighter-cover being to far away and at medium level, the Iraqi helicopter pilots found themselves in a terrible situation: there was no natural cover, and their helicopters were heavily loaded with troops and equipment. The only place to hide was between the buildings of Kuwait City. But in the cold morning air, not even this offered good protection against the Mirage armed with advance Matra R.550 MK.2 all aspect missiles. Several Mi-8's managed to get their troops off before being attacked, but then a wild helicopter vs. Jet fighter dogfights developed, in which the Mi-8s and Mi-25's simply stood no chance…"

The following Dassault Mirage F-1CK returned between July 1 and 3, 1991 after the end of the conflict: 701, 702, 704, 705, 706, 707, 709, 710,715 aircraft displayed at the KAF museum: 717, 719, 722, 723, 724, 725, 727.

McDonald Douglas A-4KU & TA-4KU Fighter Bombers

Kuwait Fighter Squadrons No.9 and No.25: Ahmad Al-Jaber KAF Base.

Known KAF serial numbers: Douglas A-4KU (30): KAF serial numbers 801-830 (Bu#160180 to 160209). Douglas TA-4KU (6): KAF serial numbers 881-886 (Bu#160210 to 160215), The aircraft were delivered between 1977 and 1979

On August 2, 1990 it is reported that the KAF had 29 Skyhawks available (aviation magazine source) that during the afternoon 19 A-4KU and 2 TA-4KU were flown to Bahrain and later to Dahran, Saudi Arabia and 5 A-4's were captured by the Iraqi Army, were returned to Kuwait in February 1992, not in good conditions.

During the defense of the city the presence of the KAF A-4's was felt as noted in the Book "Days of Fear"

"Even if Kuwaiti artillery could not hit the Iraqis coming down Mutla'a, the invaders still had to content with the Kuwaiti Air Force. By mid-morning with Iraqi armor in Kuwait City, the infantry followed on buses. Several Kuwaiti A-4s from Al-Jaber base caught a convoy of these at Mutla'a and strafed them, killing many Iraqis and setting the buses alight."

Another problem faced by the Kuwaiti A-4 pilot was the lack of preflight briefings before taking off to engage the enemy within the city as noted in the following passage:

"As the Kuwaiti artillery were engaging the "Medina", a single Kuwaiti A-4 Skyhawk flown by Major Majed Al-Ahmad. It circled the Kuwaiti artillery position twice, the Kuwaiti gunners held their breath. There was no air to ground communications between them and the little bomber. They feared they might be targeted, as they were so close to the Iraqis. They had good reason for concern. The Kuwaiti pilots could not identify the Kuwaiti Chieftains from the air. Information from the GHQ was non-existent, so they had little or no pre-mission briefing. For all they knew, every vehicle on the ground was Iraqi. Fortunately for the Kuwaiti artillery, Al-Ahmad chose the Iraqi column closer to Ali Al-Salem as the better target and bombed it."

As the fighting continued, the KAF A-4's continued to engage the Iraqi ground forces with no interference from the Iraqi Air Force but reportedly an internet source mentions that during one of the Iraqi raids that were escorted by Iraqi Mig-29's and some Mirage F-1's actually meet Kuwaiti Skyhawks at least once, but there were no air combats:

"Although surrounded, Ali Al-Salem was not yet out of the fight. From 1.30 p.m., the tower vectored a further seven sorties of A-4's from Al-Jaber base onto the new column. The Iraqis had no air cover. After their mauling at the hands of the Kuwaiti Hawk batteries earlier in the morning, the Iraqi Air Force was staying out of harms way. The A-4's rolled in on the Iraqi ground troops, drooping 500 lb bombs and firing Zuni air to ground rockets. By an incredible stroke of good fortune, one of the A-4's hit an ammunition truck in a group of bunched up vehicles, which blew up, destroying many other vehicles."

"Despite this success, flights of up to 30 Iraqi Mi-8 hip helicopters were ferrying Iraqi troops over the heads of the 35 Brigade (Kuwaiti army) into Kuwait city to the east. The KAF could not handle the volume of Iraqi aircraft. The Hawk battery at Mutla'a, one of the most critical in the country, had not been in action, and was now captured. All serviceable Mirages had evacuated to Saudi Arabia, but Lieutenant Adnan Abdul Rasool in a A-4 shot down a single helicopter at 1.00 p.m., the last of the five destroyed by the Skyhawks."

The KAF A-4's undertook more actions before they were ordered to fly out to safety and some were witnessed by the people in the city:

"The large Iraqi helicopters and gun ships were not the only aircraft in action over the city at the time. The Kuwaiti Air Force was still fighting back, with A-4's from Al-Jaber base."

"In late morning, two A-4's loaded with 500 lb bombs were on their way to bomb an Iraqi column at Mutla'a when their base received reports of the Iraqi concentration near the Sheraton. The two aircraft split up, with Lieutenant Ali Saud diverting to Sheraton, and his colleague continuing on to Mutla'a. Saud rolled in on the Iraqis gathered on an open area in front of the Roman Catholic church and dropped his bombs, shaking the windows and rattling nerves throughout the city center, before returning to base."

"Shortly afterwards, in the Al-Muthanna, we were jolted by the roar of fighter planes nearby. Then someone spotted them circling perhaps 500 meters away at the level of the thirteen floor. We rushed to a bedroom window to get a better view. They were close enough for us to see the pilot's white helmets under the canopies, but moving too quickly to identify any markings. I thought they looked like Kuwaiti Skyhawks, but we could not be sure."

"The two jets swooped and banked in figure of eight 500 feet above the city center, as if they were dancing. They seemed to be trying to see something on the ground below scattered black puffs of anti-aircraft fire clawed towards them. We could not be certain where the fire was coming from."

"Suddenly both jets dived one after the other, at an angle of 45.Halfway into the dive they each fired two rockets from under their wings, the propellant leaving a line of hot fire behind each speeding missile. As the weapons cleared the aircraft, each jet turned sharply out of the dive, as they had hit an invisible trampoline. It was an instant change of direction, both aircraft immediately turned northwest and sped away."

"We could not tell at the time whose jets they were. Some maintained they were Iraqi but by them the Iraqis had control of that area. They could hardly call in an air strike on their own troops. We never even discovered for sure what they were firing at. The only real damage we saw in that area later was a burned out police station, but there were no holes in its roof. Whatever the target was, someone was going to a lot of trouble to hit it. If the planes were Kuwaiti, we were greatly heartened that they were putting up a fight."

"Several other A-4 sorties were flown against Iraqi ground troops, but it was hopeless battle. There were just to many Iraqis, and they were already deep into Kuwait. Furthermore, with the Kuwaiti being depended on expatriate ground crew, they were unable to use all their aircraft or to turn them around as quickly as they should have been able too."

"During the afternoon, responding to reports of Iraqi vessels approaching the coast, two A-4's'intercepted a large landing craft escorted by a fast attack craft near Failalka. One dropped cluster bombs on the larger vessel, but was unable to confirm any damage. The last sorties of the day were flown by Lieutenants Salem Ajmi and Adman Hammadi on the Salmi Road, at about 4.30 p.m."

During the invasion the KAF A-4's were credited with 5 Iraqi helicopters shot-down and the destruction of 104 armored vehicles.

Known Aircraft Victories Claimed by A-4 Pilots on 2 August, 1990:

Aircraft launched about 8:30 am:

Major Ala'a Al-Sayegh: 1 Iraqi helicopter (20mm guns)

Major Hussein Al-Qattan: 1 Iraqi helicopter (20mm guns)

Aircraft launched about 10:00 am

Lt .Col.? Adnan Abdul Rassol: 2 Iraqi helicopters (20mm guns)

Aircraft launched about 1:00 pm:

Lt. Adnan Abdul Rasool: 1 Iraqi helicopter (20mm guns)

Following surviving A-4KU (17) returned to Kuwait on July 6 and 7, 1991: 801, 802, 807, 809, 811, 812, 813, 814, 816, 817, 818, 819, 822, 824, 825, 827, 829.

Following Surviving TA-4KU (2) returned to Kuwait on July 6 and 7, 1991: 884, 886.

Note; it should be noted that at the KAF museum there are 3 Douglas A-4's: one A-4KU .805 and two TA-4KU 881 and 882.

Hawk T.MK.64 Trainer (KAF 140-151)

The KAF acquired 12 aircraft, and one simulator for No.12 Squadron at Al Salim. On 2 August 1990, aircraft flow by the instructor-pilots destroyed several Iraqi vehicles and shot-down at least 2 Mi-8 and 3 Gazelle helicopters. (Not confirmed by Kuwaiti sources). 7 aircraft were flown to Bahrain; one KAF 142 was damaged during landing, 5 aircraft captured by the Iraqi army. After the war, these 5 aircraft and the simulator were given back by Iraq to Kuwait in February 1992. After the war the survivor returned in July 1991 to Kuwait.

Aircraft Reported Lost by the KAF during the Invasion

8 Dassault Mirage F-1 captured (flown to Iraq)
10 McDonald Douglas A-4 captured
6 BAe Hawks captured (all under maintenance) (flown to Iraq)
4 Aerospatiale SA.342LGazelles (one crashed near the Saudi border killing 4crew)
4 Aerospatiale SA.330H Pumas (one shot-down by accident by Hawk missile killing crew)
3 Aerospatiale Super Pumas (one destroyed on the ground at Ali Al-Salem)
1 L-100-30 Super Hercules KAF322 captured (International airport)
1 DC-9-32 captured KAF320 (International airport) later destroyed by retreating Iraqi forces.

Note: The helicopters like the Gazelles, Pumas and Super Pumas were returned to Kuwait, late 1991 by Iraq.

After the end of the war, the minister of Defense Sheik Ali Sabah Al Sabah stated that Iraq had agree to return all captured equipment by the summer of 1992, among the listing of tanks, vehicles, and artillery pieces they were 11 aircraft and four helicopters, but at the same time Kuwaiti General Al Sabah also reported that Iraq had done the following:

1. Iraq was actively testing its captured Hawk missiles.
2. Some of the A-4's Iraq had captured had been so damaged, that they had to be flown back to Kuwait in slings.
3. 6 Mirage F-1 had been declared missing or destroyed
4. A returned C-130 had been seriously damaged.

KAF Aircraft that Left the Country by 3 August 3, 1990:

16 Dassault Mirage F-1 Saudi Arabia
21 Douglas A-4/TA-4 Skyhawks Saudi Arabia
6 BAe MK.64 Hawks Bahrain
16 Aerospatiale SA.342L Gazelles UAE ground forces
6 Aerospatiale SA.330H Pumas British ground forces
3 Aerospatiale SA.330 Super Pumas British ground forces
3 Lockheed L-100-30 Hercules KAF323, 324 and 325
1 Douglas DC-9-32 VIP KAF321

At 0600 hours all KAF Gazelles, Pumas and Super Pumas and BAe Hawks ordered to fly to Saudi Arabia. All available A-4's flown out by 3 August 1990 to Dhahran.

Personnel Losses of the KAF during the Invasion

On 2 August 1990 the following personnel lost their lives:
Killed when their Puma helicopter was shot-down by friendly fire in error near Ahmadi by Hawk surface to air missile.

Name & Rank	Age
Lt. Col. Al-Rasheedi, Faiz A	31
1st Lt. Al-Sayagh, Thia	36
1st Sgt. Jaber, Kamil R.	28
Lance Corporal Al-Fadagh, Hassan T	18

Killed in the commanders officer and operations building at Ali Al base at 0545 during Iraqi bombing attack:

4

Name & Rank	Age
Corporal Saeedi, Fahaid R.	27
Warrant Officer Al-Thufeiri, Warid.M	31

On 3 August 1990, the following personnel were killed in the second day of the invasion. On this day a Gazelle helicopter crashed in undetermined circumstances near the Saudi Border, during the evacuation of KAF aircraft:

Name & Rank	Age
Capt. Al-Refai, Anwar A.	29
Lt.Al-Anzi,Hamdan M.	24
Lt.Al-Baijan, Khalid A.	22
Lt. Al-Obeid, Mohammed M.	22

A Jordanian national serving in the Kuwait Air force was shot and killed at the Air Defense base near Kuwait International airport

Name & Rank	Age
Airman Sabri, Ra'ad M.	22

Kuwait Air Force Air Defense & Air Defense Brigade
Hawk Air Defense Missile Batteries

US Improved Hawk Missile

On 1 August, at 2345 hours, all the missile batteries were put on full alert. Visual control devices were exercised and zeroed in for accurate aiming. Additional Hawk missiles were issued. Unfortunately, the Iraqis confiscated them at Ras-Al-Arz before they were delivered to the 2nd Detachment on Failaka Island. 3 out of 4 missile sites were in action that day:

One Battery at Failaka Island: 2nd Hawk Det. accomplished the following:

- 0455 shot-down an Iraqi fighter
- Shot down 3 confirmed fighters and one unconfirmed in the next 3 hours
- 0915 engaged 3 helicopters, but was unable to confirm any kills
- 1430 shot-down 1 helicopter with its last missile.
- In 7 engagements destroyed 5 fighters and 2 helicopters with 10 missiles.

One Battery near Ahmadi: 3rd Hawk Det.

One Battery near Al-Adourmi: 4th Hawk Det.

- In 12 engagements destroyed 1 fighter, 8 helicopters, 1 Friendly with 15 missiles
- Shot down by accident KAF Puma helicopter killing the crew of four.

One Battery near Ras Al-Jalayh: Capt. Abdullah Al-Asfoor

- At about 0725 hours fired 3 missiles and shot-down 1 large Iraqi helicopter.
- At about 0915 hours shot-down an Iraqi helicopter, with the 4th missile launched.
- Shot down third Iraqi helicopters
- Shot down an Iraqi helicopter.
- (had by that time fired six missiles and shot-down 4 helicopters)
- He later fired two missiles at an Iraqi fighter but missed.

One Battery near Mutla's (this battery did not engage the enemy)

- They claimed the following kills (After firing 24 hawk missiles)
- 10 confirmed Iraqi helicopters
- 4 confirmed fixed wing fighters
- 3 unconfirmed helicopters
- 1unconfirmed fighter
- 1 Friendly KAF Puma Helicopter (crew killed)

SAM-7 "Strella" Shoulder-Launched Missiles

Air Defense Brigade

The SA-7 (Strella) units at Air Defense Brigade Headquarters and Ahmed Al –Jaber Air Base had many engagements and destroyed the following enemy aircraft:

- 1 Iraqi Mirage fighter over Al-Jaber air base about 0930 hours 3 August 1990.
- 3 Iraqi helicopters over the Air Defense Base 2 August 1990.
- 2 other hits unconfirmed

It should be mentioned that inside the Kuwaiti Air Force museum there is a diorama showing the remains of a Iraqi Mi-17 helicopter shot down by a SAM-7 shoulder mounted missile. With the following inscription:

> "The remains of an Iraqi helicopter. This Russian-built Mil-17 helicopter owned and piloted by Iraq was shot down by a Kuwait Air Defense Brigade SAM-7 missile on 2 August 1990 in the Subhan area."

Also there were no SA-8 (Osa) missile engagements, but many Iraqi helicopters flew into the electrical high-tension cables and into the ground at night through their own negligence, lack of night training and absence of night vision goggles. These destroyed helicopters were not claimed by the KAF.

Kuwait Air Force Museum

This museum is located on the military side of Kuwait City International airport and was a surprise to the author to find out its existence, and was able to visit it on three occasions to obtain information for this article. This museum was opened in 1996 under the leadership of Major General Saber M. Al-Suwaidan who took over the KAF in 1992 who continued with the reconstruction of the KAF and modernization of the air force.

Among it exhibits it reports the following official victories score by the Kuwait Air Force and the Missile Batteries and shoulder launched missiles.

Air Defense units: 18 Iraqi aircraft
Mirage Fighter Squadrons: 16 Iraqi aircraft
Skyhawk Fighter Squadrons: 5 Iraqi aircraft and destroyed 104 Iraqi armored vehicles.
Total: 39 Iraqi aircraft

The Iraqi Viewpoint

As with any conflict, it is interesting to compare the actions from the other side and after the end of the war a number of captured Iraqi documents were preserved and later published in a book called "Kuwaiti Resistance as Revealed by Iraqi Documents" that was compiled by Ali Abdul-Lateef Khalifough (PSC) (Col.Rtd) by the Center of Research and Studies of Kuwait in 1994, who wrote the following:

> "Iraqi attacks at 0500 hours August 2 by a attempted air drop using 45 helicopters carrying special forces helicopters escorted by jet fighters, Kuwaiti air defense means confronted them downing one of the helicopters near Al-Khedr position forcing the rest to fly away".
>
> "Second attempt an hour later Kuwaiti air defense shot down 7 helicopters and 2 fighters thus aborting second attempt however enemy seizes Ras Al-Ard harbor allowing third attempt on island 100 boats, Iraqi troops

penetrate the island as late as 0400 hours the next day (3 August)"

As for the role of the KAF during the defense of the country, this study mentions the following:

"As this study is entirely based on documents sized from or left by the enemy and as the available documents do not include any related to the role of the KAF in the resistance, it is unfortunate that the KAF shall not receive the coverage it actually deserves in this book. The only reference to such a role occurs in a report by the 14th Brigade (Republican Guard): `at 1320 on August 2, our brigade was exposed to an air raid by a jet fighter (Phantom) as it was advancing the aircraft dropped its load of 4 missiles on the sand'. This reference simply shows that the KAF took part in the resistance. In his book "Epics of Sacrifice" by Colonel Dr. Mohamed Abdul Latif Al-Hashem provides details of the KAF role in resisting the enemy on August 2 He first indicated that the Kuwaiti armed forces in general and the air force in particular encountered major disadvantages including the very short warning period, unprepared ness for such treacherous act by a neighboring and sisterly country much indebted to Kuwait, electronic jamming, and heavy hostile bombing. However, the air force had acted valiantly and effectively during the very start time that was available for air operations."

"He further indicates that despite electronic jamming, the KAF was able to monitor enemy troop movements, cautioning its own units as well as the general HQ. It also gave orders for confronting the enemy. Although the enemy had destroyed the runways, KAF planes took off using ordinary roads and attacked enemy land formations along the axes of the advance."

"The enemy air forces losses were estimated at about 50 aircraft of various types (fighters, fighter-bombers and troops carrying helicopters). Kuwaiti air defenses means in the meantime downing 19 Iraqi fighters and helicopters raising the enemy's total air force losses to 39: (7 jet fighters and 32 helicopters".

"It is noteworthy that a Kuwaiti pilot officer had downed 3 enemies in a single sortie on August 2 according to the same source. Wreckage of a number of Iraqi helicopters were seen near high-tension power lines (these are in addition to the 32 referred to earlier). Due to the destruction of air bases and runways, Kuwaiti aircraft headed for Saudi Arabia and Bahrain."

Operation Desert Shield/Storm

During this period, the surviving KAF fighters and fighter-bombers flew their missions from Saudi Arabia. They would suffer the loss of one aircraft during the liberation, On January 17, 1991, Lt. Col. Mohammed Mubaraks McDouglas A-4KU 828 was shot down after dropping ordinance on a Iraqi target; the pilot was taken POW and later released.

The following observation was made concerning the conduct of the Kuwaiti pilots during the war of liberation of their homeland:

"The Kuwait pilots were perhaps the mostly highly motivated of the Allied flyers. At last it was their chance to hit back. With 39 fixed wing combat aircraft, and various helicopters and support aircraft, the Kuwaitis accumulated over 800 missions during the war, second only to the Saudis among the Arab forces in mission per aircraft, and marginally better than the French."

"However one Kuwaiti A-4 Skyhawk was shot down in the Burgan oilfield south of Ahmadi. The pilot, Lieutenant-Colonel Mohammed Mubarak apparently tried again to hit a target he missed on his first bomb run, using the same direction of attack, thus giving the Iraqi gunners a chance to hit him. He ejected safely, was captured and was later paraded on Iraqi TV with downed US, British and Italian airmen. The Americans also lost an observer plane over Kuwait on 18 January, with 2 Marine crewmen captured".

The Combat Record of the KAF 1990-1991

Information released on its participation in Desert Shield (up to January 16, 1991)

Desert Shield

	Support Hours/Sorties		Operational Hours/Sorties
A-4 Skyhawks	451.1/427	357.3/258	
Mirage F-1			425.0/429
Gazelle	85.4/103		
Cougar	144.3/113		
Puma	131.9/120		

Desert Storm

	Support Hours/Sorties	Operational Hours/Sorties
A-4 Skyhawk	17.6/20	970.8/621
Mirage F-1	75.0/77	200.0/128
Gazelle		41.0/100
Cougar	262.4/168	
Puma	112.4/98	

Totals

	Hours/Sorties
A-4 Skyhawks	1,796.8/1,326
Mirage F-1	700.0/634
Gazelle	127.3/203
Cougar	406.7/281
Puma	244.3/218

As for the number of claimed aerial victories during the conflict the KAF, came out in a good position as show in the following data:

Unit		Aircraft type	Number of kills	
USAF				
58th TFS/33rd TFW	F-15C		15	
53rd TFS/3rd6TFW	F-15C		11	
525th TFS/36rd TFW	F-15C		5	
60th TFS/ 33th TFW	F-15C		1	
335th TFS/4th TFW	F-15E		1	
32rd TFS/32rd TFW	F-15C		1	
511th TFS/10th TFW	A-10A		1	
706th /926th TFW		A-10A	1	
42th ECS/66th ECW	EF-111		1	
	Total		37	
KAF				
No.18/61 Sqdn.		F-1CK-2	16	
No.9/25 Sqdn.		A-4KU	5	
	Total		21	
USN				
VFA-81		F/A-18C		2
VF-1		F-14A		1
	Total			3
RSAF				
No.13 squadron		F-15C		2
	Total			2

Claimed Iraqi Aircraft by Coalition Air Force Types

F-15C	35	(USAF/RSAF)

F.1CK-2	16	(KAF)
A-4KU	5	(KAF)
A-10A	2	(USAF)
F/A-18C	2	(USN)
F-15E	1	(USAF)
F-14A	1	(USN)
EF-111	1	(USAF)
Total	63	

Iraqi Aircraft Claimed by Coalition Air Forces:

USAF	37
KAF	21
USN	3
RSAF	2
Total	63

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Kuwait Air Force Museum

The Museum, located on the military side of Kuwait International Airport, was opened in 1996. During my visit there on 21 June 2003, the aircraft on display were:

Aircraft displayed outside of the Museum entrance:

McDonald Douglas TA-4KU 881 160210a
McDonald Douglas TA-4KU 882 160211a
Percival Jet Provost T.Mk.4 KAF 104

Aircraft displayed inside of the Museum:

Westland Whirlwind 2 S-55 helicopter, VIP configuration 4 Seats.
Auster J5P Autocar?

Hawker Hunter FGA Mk.57	214		
Percival Jet Provost T.Mk.4	101		
BAC Lightning T.Mk.55k	411	95029	
McDonald Douglas A-4KU	805	160184a	Free Kuwait
Dassault Mirage F-1CK	715		Free Kuwait

Cockpit section TA-4KU
Complete Hawk missile system
Diorama of an Iraqi Mi-17 helicopter shot down during the invasion of Kuwait

Aircraft displayed in a garden in front of the Deputy Chief of the KAF:

Hawker Hunter FGA Mk.57
BAC Lightning T.Mk.53K "C" 402 (412?) 95292

KAF Air Base Ali Al Salem; 1 June 2003

BAC Lightning F.53 "R" 53-423 Gate Guardian

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Captions for photos on pages 125-128

Photos taken by Santiago A. Flores. at the KAF Museum on Oct.28, 2002 (#s 1-9) and 21 June 2003(#s 10-16).

1. Lt. Col.Mohamed Mubarak, the only KAF pilot to be shot down and taken POW by Iraqi forces on 17 Jan 1991 he was shot down by Iraqi ground fire.
2. Lt. Col.Mohamed Mubarak and his A-4KU No.828 either from No.9 or No.25 squadron, he was shot down in this aircraft on the first day of Desert Storm while attacking ground targets in Kuwait, he was taken POW, and after the war he was return to Kuwait.
3. Diorama in the Kuwait air force museum of the remains of a Iraqi Army Air Corp (IrAAC) shot down by a Kuwaiti shoulder-mounted SA-7 missile on August 2, 1990.
4. Close up of remains of a Iraqi Army Air Corps Mi-17 shoot down by Kuwait Air Defense Brigade SA-7 missile on 2 August 1990.
5. Another view of the American made Hawk missile battery on display in the KAF Museum, a system that was responsible for shooting down about 14 Iraqi helicopters and aircraft in the first day of the invasion.
6. BAC Jet Provost T.51 No.104 preserved outside of the KAF Museum, Kuwait City international airport.
7. Kuwaiti AF TA-4KU No.881(169210A) displayed outside of the KAF Museum,
8. Another Kuwaiti TA-4KU No.882 (160211A) on display outside the Kuwait Air Force Museum.
9. Another view of BAC Jet Provost T.51 No.104 one of six delivered to the KAF, to be the first jet aircraft, Another one, 101, is displayed indoors.
10. Cockpit area of KAF Mirage F.1CK-2 No.715 showing its Free Kuwait painted under the cockpit of the aircraft which its missing its canopy.
11. Kuwait Dassault Mirage F.1CK-2 No.715 on display indoors of the Kuwait Air Force museum with a full display of weapons to include bombs, rockets, aams, and cannon armament.
12. A battery of Hawk missile system on display indoors the Kuwait Air Force Museum.
13. Kuwaiti and contract ground personnel preparing a KAF A-4KU No.807 for a combat mission from Saudi Arabia against Iraqi forces in Kuwait.1991.
14. A Kuwaiti A-4Ku pilot being congratulated after the return from a successful combat mission against Iraqi forces in Kuwait.
15. Kuwaiti military officials visiting the pilots and the ground personnel of no.9 and No.25 Squadron flying A-4KU during operation Desert Shield out of Saudi Arabia.
16. Entrance to the Kuwaiti Air Force Museum located near the flight line on the military side of the Kuwait City international airport.

Curtiss-Wright Model 16 Exports

Dan Hagedorn

[Editor's note: This is a reprint of a small part of an article that appeared in the July 2005 issue of *Skyways*. The whole article cover the development of the Model 16 and it use in the US and overseas. The non-US service of the Model 16 is reprint here with the permission of the editor of *Skyways* and the author. For subscription information on *Skyways* contact David Ostrowski, 5411 Masser Lane, Fairfax, VA 22032, USA.]

Obviously, there was a significant gap in the Manufacturers Serial Numbers (msn's) in the Model 16-E series shown above, amounting to 10 numbers (16E-3509 to 3518), which have hitherto not been accounted for. It was at this point, in late 1932 and early 1933, that the full benefit of the Curtiss-Wright corporate partnership started to be felt by the St. Louis factory, as modest export sales successes started to be realized with the series.

Documenting the exports of Model 16 series aircraft has. been based primarily on known dates, Military Intelligence Reports, and a few rare Spanish language publications, but few primary sources have been found which shed light on the Serial Numbers of the entire production run.

A sales brochure developed for the export version near the middle of 1932 identified the aircraft only as the Curtiss-Wright *Trainer,* although, on some Export License Application Forms, the designated type was often cited as Curtiss-Wright *Standard Primary Trainer,* Curtiss-Wright *Standard Trainer,* CW-16 or CW-16-E-3, depending on engine configuration or customer.

The brochure described the aircraft as having been designed and constructed for".. *.the specific purpose of giving flight training to pilots who are later to fly heavier and faster military planes."* Significantly, the

Trainer was offered with the buyers choice of not less than four different engines as a Primary Trainer (100 hp Kinner K-5, 125 hp Kinner B-5, 90 hp Warner or 125 hp Warner); with a 165 hp or 175 hp Wright engine as an Intermediate Trainer and, as a Basic Trainer, with a whopping 250 hp Wright engine. With these various power plant choices, Curtiss-Wright was obviously encompassing the entire Model 16 series as a "family" of aircraft, when in fact the airframes were virtually identical, differing only in the power plants installed.

Colombia

The first foreign customer for the Curtiss-Wright *Standard Trainer* was the *Fuerza Aérea Colombiana,* which finalized an order for six on March 15, 1933. Oddly, one of the Curtiss export field representatives in South America, Cliff Travis, related in correspondence dated May 3, 1933, that these six aircraft had five-cylinder 195 hp Wright *Whirlwind* engines, an engine choice not reflected in the sales literature, and possibly an error on his part.

These aircraft were almost certainly Serial Numbers 16E-3509 to 16E-3514 and, in Colombian service, they received the serials 21 to 26. At least three survived by July 1940, the last mention of the type in Colombian military service.

China

At least six, and possibly seven, Curtiss-Wright *Standard Trainers* were exported to the Chinese Nationalist Air Force sometime between May 1933 and January 1934, although to date no firm data has been unearthed regarding these elusive aircraft. They apparently included Serial Numbers 3515 to 3518, 3521 and 3522, but. these are not confirmed. Serial number 3523 is untraced, and may have been a replacement aircraft sent to China.

Bolivia

Deeply enmeshed in the ongoing Chaco War, the *Cuerpo de Aviación Boliviana* had invested heavily with the Curtiss-Wright Export Corporation, and had acquired modest numbers of *Hawk* fighters, *Falcon* reconnaissance-bombers, and *Osprey* light combat types.

As early as September 1933, Cliff Travis, Curtiss' front man in La Paz, had attempted to interest the Bolivians unsuccessfully in a small batch of Model16s to augment the combat equipment being purchased, as the Bolivians had practically no training establishment

whatsoever at the time. Travis explained the shelving of the purchase simply: the Bolivians reasoned that it would be more expeditious to contract foreign pilots, already trained, than to go through the lengthy process of selecting and training their own.

He persevered, however, and finally obtained an order for three (and possibly four) Model 16-Es, and these were delivered January 26, 1934, and were almost certainly Serial Numbers 3524 to 3526. They received simple serials '1', '2' and '3' in Bolivian service, and probably came closest of any Model 16 series aircraft to see combat service. Speculation that a fourth machine may have been acquired is fueled by the fact that Number '3' is known to have been written off in an accident on May 19, 1934 (thus this aircraft may have been the 'missing' Serial Number 3523, also suggested as going to China). As of Christmas, 1934, two were fitted with A- 3 bomb racks under the fuselage and were located at Villa Montes, near the action in the Chaco War-a very poor choice for a training location as the Paraguayans were advancing on that city. This is the only known instance of arming a Model 16. They were unserviceable shortly thereafter, however, as they both needed new props. One is known to have flown there on December 31, 1934, however.

But three Bolivian Model 16s survived on the Bolivian Order of Battle as late as March 1945, when Bolivia submitted a Lend-Lease requisition requesting funding to obtain the materials necessary to repair all three of the aircraft! Needless to say, the Munitions Assignment Committee (Air) denied the request, on the quite proper grounds that Bolivia had been provided with a more than adequate number of capable training aircraft under Lend-Lease without having to essentially rebuild the Model 16s.

By December 1946, the Bolivians had apparently managed to return one of the three aircraft to airworthiness (probably by cannibalizing the other two) and it was assigned to *Escuadron de*

Entrenamiento No.2 at Cochabamba with other types. The Ministry of Defense had in fact issued a directive in September 1944 instructing that 17 obsolete military aircraft be turned over to the civil flying schools, and this was to have included two of the Model 16s, but this apparently did not happen.

Brazil

On June 25, 1935, Brazil announced that she had placed an order for 45 U.S. built aircraft to augment her Army air arm. This order, which included 30 Waco types, also included 15 Curtiss-Wright Model 16-Ws at $7,000 each, reflecting a rather nice profit margin for the Export Corporation.

The Brazilian aircraft were delivered in July 1935 and were Serial Numbers 3527 to 3541, and were assigned Brazilian Army serials K 175 to K 189 as primary trainers. Nearly alone amongst the exported aircraft, these had 125 hp Warner *Super Scarab* 30 engines, and these aircraft gave good service until 1942, when the last of seven survivors were transferred to civil marks in Brazil.

Two of these, K 179 (msn 3531) and K 189 (msn 3541) collided on July 15, 1936 at the Army Aviation School at Campo dos Afonsos near Rio at an altitude of 500 meters. One fell in a street in Villa Marechal Hermes, adjoining the flying field, where its fuel was ignited by a downed power line nearby. The other fell in the back yard of a private residence and, like the other, fuel leaked into the residence and set it on fire as well, burning the proprietress severely as she tried heroically, but in vain, to extinguish the blaze. One of the aircraft was piloted by Cadet Manoel Marques Cardeal, flying solo, while the other was crewed by Cadet Paulo Ferreira, and instructor 1° Ten. Victor Barroso Coelho. All three were killed.

At least a few of the Brazilian Model 16- W s, besides their duties as trainers, were used on short-haul routes by the military run *Correo Aéreo Militar (C.A.M.),* a domestic service for air mail during the 1930s. This was almost certainly the only known use of Model 16 series aircraft in this role.

As newer equipment and Lend-Lease supplied aircraft started to arrive in 1941 and 1942, the well-worn

Model 16- W s were pensioned to the Brazilian system of national and regional aero clubs, notably the *Aeroclub do Brasil,* with serial number 3530 (K 177) becoming PP-RHI (and now preserved in the Brazilian Air Force Museum at Campo dos Afonsos, marked in error as K 178),3532 (K 180) becoming PP-TZL, 3533 (K 181) became PP-AEU in 1942 (and remained registered until 1948), 3535 (K 183) became PP-AEZ in 1941 (and remained registered until 1946), 3538 (K 186) became PP-TZP, 3539 (K 187) became PP-TLR, and 3540 (K 188) became PP-AEW in 1941, remaining registered until 1946.

Ecuador

Curtiss-Wright Export Corp. scored a major sales success in Ecuador in the first five years of the 1930s when they for all intents and purposes equipped the reorganized *Fuerza Aérea Ecuatoriana (FAE).* A mix of Curtiss-Wright Cl4R *Osprey* light combat aircraft, Model 16-E (followed by Curtiss-Wright *Standard Primary Trainers)* and multi-purpose Curtiss-Wright 19Rs, plus a dedicated instructor, comprised nearly the entirety of the force.

First to be received in this troika of types were six Model16-Es contracted for on August 12, 1935, almost certainly Serial Numbers 3542 to 3547. These apparently received Ecuadorian serials 10 to 15.

It is clear from intelligence reports of the period, however, that Ecuador purchased a total of at least nine Model 16 series aircraft in 1935. Unfortunately, known Manufacturers Serial Numbers between the known Brazilian msn's and the known Argentine Navy msn's (q.v.) do not leave enough candidates for nine aircraft! Your scribe is at a loss to account for this discrepancy, and can only suggest that the three aircraft that cannot be accounted for must have been second-hand aircraft formerly on the U.S. civil register, the fates of which are unknown.

By December 8, 1935, the Curtiss-Wright tutored *Escuela Militar de Aviación* was formally opened at the Simon Bolivar airdrome in Guayaquil, and a lineup of at least six Model16-Es was published in Guayaquil newspaper reporting on the dedication. As with any such training institution, however, attrition at the hands of cadet students commenced almost immediately. On March 2, 1936, three Model 16-Es were conducting a cross-country to distant Quito, a treacherous trip through the Andes under the best of circumstances. Two became lost and were obliged to make forced landings after two hours of flight, one at Quininde and the other on the treacherous slopes of mount Chinborazo. They were both destroyed in these landings.

Shortly thereafter, Ecuadorian *Teniente* Carlos Cabezas was practicing touch-and-goes at Guayaquil in Model 16-E No.12 when he was momentarily distracted, lost control, and veered off the runway, striking *Alfarez* (equivalent to Ensign) Jorge Piedra with the propeller and killing him instantly. The aircraft is believed to have suffered only minor damage in this unfortunate incident.

Later that year, on November 8th, a news clipping in Guayaquil reported on the graduation ceremonies of the second class of new military aviators, and clearly visible in the lineup were six Model *16-E/Standard Primary Trainer* aircraft, Ecuadorian serials 11, 12, 13, 16, 17 and 18. Since Serial Number 10 is known to have crashed July 6, 1936 (the date is also given as June 6, the crew consisting of *Teniente* Ernesto Renella and Alfonso Vasquez Vera, suffered a ground loop at Guayaquil which severely damaged the aircraft), and No.13 suffered an accident on June 10, 1936 (the date of this accident has also been reported as May 10, 1936, when the pilot, *Teniente* Gonzalo Garcia made a successful forced landing at Mapasinge near a farm house close to Guayaquil), the two aircraft lost enroute to Quito were apparently Serials 14 and 15. No. 10 and 13 were apparently repaired by the time of the December graduation ceremony.

Yet another cross-country of an Ecuadorian Model 16-E on June 10, 1937, nearly caused an international incident. One of the aircraft, operating for some reason

in the difficult southern territory of Ecuador near the Peruvian border, became lost and alighted in Peruvian territory. The two crew members, *Tenientes* Carlos Cabezas and Ernesto Renella (son of the well-known WWI aviator Cosimo Renella) were held for a time and, years later, during the 1941 border war between Peru and Ecuador, the Peruvian newspaper *Caretas*

published a photo of the interned crew of the 1937 seizure, and reported them as captives of the 1941 conflict!

By October 24, 1936 the school at Guayaquil could count only four Model 16-Es as active, which appears to agree with known losses noted above. By June 20, 1939, this had been increased to five, indicating that at least one of the previously damaged aircraft had been returned to service. This appears to be corroborated by a September 20, 1940 report filed by 1. H. Gray, the Curtiss-Wright hired instructor to the FAE, who stated categorically that Ecuador had acquired a total of nine Model 16-Es, five or six of which could be fully returned to service as "... *spares for same are now available."* However, an Air Order of Battle report for Ecuador dated December 21, 1940, stated that the service had a total of *nine* Model 16-Es, all of which were inoperable for one reason or another.

Yet another accident involving a Model 16-E occurred on August 16, 1937, when *Capt.* Eduardo Solorzano took off with his friend *Capt.* Franklin Haro early in the morning to practice aerobatics. They crashed near the mouth of the Guayas river and, three days later, their bodies washed ashore.

These known losses, taken together, throw into question the number of Model 16 aircraft actually acquired by Ecuador to this point. An application for a U.S. Export License (No.1753) from Curtiss-Wright dated June 24, 1936, clearly stated that the firm was asking for authority to export six Model 19Rs *as well as* three Curtiss-Wright *Standard Primary Trainers* to Ecuador. These aircraft appear to have been replacements for the three aircraft known to have been lost to that time, and which can be accounted for. An analysis of known Argentine Model 16-E serial numbers and acquisition dates seems to suggest that these three machines were possibly msn 3558 to 3560.

Since the known Ecuadorian serial numbers for the Model 16-Es as of December 1936 are known to have ranged from 10 to 18, and as additional serials for Model 16 aircraft are known to have included 20, 23, 24 and 25 by May 1944, the only conclusion is that Ecuador (a) received at least 12 (not nine) aircraft from the U.S. and, (b) using spares acquired from

Curtiss-Wright, managed to rebuild at least three of the previously damaged aircraft and issued them new serial numbers.

Subsequent intelligence information, when compared with the above dated reports, seems to support this contention. As of June 2, 1941, the service was reported having five Model 16-Es. By March 17, 1943, the service had three, all at Salinas (Serial Numbers 20, 23 and 25, all unserviceable due to engines needing top overhaul). By August 28, 1944, three were still reported on the Order of Battle, but were all still unserviceable as "needing engines." This was the final report of the Model16 in Ecuadorian military service.

But this is not the end of the Model 16 series at the Equator. Apparently the two best surviving military aircraft were passed to the newly formed *Aero Club del Ecuador* at or near the end of World War Two. Although the identities of these aircraft have not been traced conclusively, they may have been the first two aircraft registered on the post-war Ecuadorian Civil Register, HC-SDA and HC-SDB.

Argentina

As elsewhere in Latin America, by the mid-1930s the Argentine Naval aviation service was in the midst of modernizing and expanding its force. The selection of a new, standard primary trainer was high on the list of acquisitions and, after a series of inquiries and sales demonstrations, the Navy decided to order 10 Curtiss-Wright 16Es in October 1935.

These aircraft were reportedly equipped at delivery, however, with 145 hp Warner *Super Scarab* engines, which should have made them Model 16-Ws, and they were confidently reported as having arrived so equipped at Buenos Aires on May 13, 1936. However, an Office of Naval Intelligence Report dated July 1, 1936, perhaps more accurately, reported the aircraft as arriving with 175 hp Wright engines.

The new aircraft were immediately assigned to the *Escuadra Aérea de Escuela* at the Punta del Indio Naval Air Base. Significantly, the contract between the Navy and Curtiss-Wright authorized the Navy to "... *rebuild damaged planes"* but, as will be seen, this authority was rather exceeded by the Argentine Navy maintenance organization in later years.

The Curtiss-Wright built Model 16Es (sometimes cited as Model 16E-3s for reasons unknown, and in time referred to locally as *Kelitos,* a diminutive alluding to the similarity of the aircraft used by some U.S. trained Argentine Naval aviators at Kelly Field, Texas) appear to have been issued Curtiss-Wright Manufacturer's Serial Numbers between 35481 and 3557, which includes 3550 and 3554, the only two positively identified as going to Argentina. (MSN 3548 has since been returned to the U.S. and was registered as N71068, owned by Aircorr, Inc., of Houston, TX. As of December 1991, it was painted in highly accurate Argentine Navy colors as "E-35.") In Argentine Navy service, the aircraft carried a series of codes on the fuselage sides and in abbreviated form on the wings, similar to the temporary codes used on U.S. Navy aircraft of the time. These appear to have been E-30 to E-39 initially.

The Navy, however, interpreting the contract with Curtiss-Wright rather loosely, apparently decided to make use of a number of brand new 175 hp Wright engines it had acquired and laid down as many as 13 additional Model 16Es of its own construction starting as early as October 1938. These aircraft received Navy codes l-E-l to l-E-13 (with the numerals' l' to '13' also appearing on the upper and lower mainplanes). When more modern aircraft became available after the end of World War Two, the Model 16Es were gradually phased towards general purpose uses, and at least eight of the surviving aircraft were issued codes in the range 1-N-l to 1-N-8. At least one other aircraft carried the unusual code C.E.ll and is known to have crashed at Puerto Belgrano, killing both crewmen, on November 4, 1937. In the meantime, the Argentine Navy had retroactively adopted a "permanent" serial number to be assigned to each aircraft, similar to the so-called Bureau of Aeronautics Numbers (BuNo) assigned to U.S. Navy aircraft. Although these numbers are not fully understood, they included 0031, 0032 and 0035.

The existence of the Navy-built examples appears to be substantiated by several intelligence documents. U.S. reports dated August 27, 1941 and August 28, 1942, both reflected a total of 16 CW-16Es on hand. Another report dated April 26, 1943, reflected 16 on hand, all in use as trainers, at the *Comandante Espora* Naval Air Base. Somewhat humorously, a U.S. Navy report dated August 21, 1943, apparently had trouble identifying the aircraft, as they were given as "PT-16"s! A

British originated Order of Battle report dated September 3, 1943, found in the British Public Records Office reported a total of 15 CW-16Es in Argentine Navy service at that time.

Losses to Argentine Navy Model 16s are known to have included at least three aircraft. The earliest of these was C.E.ll, noted earlier, lost November 4, 1937 (but also reported, perhaps more accurately, as l-E-ll, and this aircraft was rebuilt); 1-E-17 on June 15, 1941 and 0035 some time in 1949.

The Navy declared a total of 15 CW-16Es surplus in 1949 and, of these, at least six received Argentine civil registrations, although apparently ownership of some of these was retained by the Navy, as they donated four more to aero clubs as late as 1955 for glider tug duty. These included LV-HDI and LV-HHM (the latter given as msn '35' which is believed to be only the first two digits of the actual msn), both registered to the *Secretaria de Marina, Director Materiel,* LV-ZAW of the *Club Aereo de Patagones* and nicknamed "El Carancho" (msn 3550, this aircraft since restored for the Argentine Naval Aviation Museum at Bahia Blanca), LV-ZAX (msn 3554), LV-ZAY (msn 3549, written off November 12, 1969 while serving as a glider tug with the *Aero Club La Plata)* and LV-ZIP (formally re-registered to the *Comando de Aviación Naval* on February 5, 1956 as LV-FIB). One unidentified aircraft was offered for public sale by the Navy September 15, 1960 while another was reportedly donated by the Navy as late as September 7,1961 to the *Club Planeadores de Parana.* One of these aircraft allegedly has since been returned to the U.S. as N710682 and is owned by the Historic Aircraft Restoration Museum (H.A.R.M.) in Creve Coeur, MO.

Finally, the early Argentine Civil Register included an aircraft identified only as a "Curtiss Trainer," with a Warner *Scarab* engine and assigned Argentine civil registration R-280. Initially owned by Alberto Ogden Pierrot and later the *Club Aéreo Los Patos* it was reregistered after 1937 to LV-JCA in the modern series. This may have been a Travel Air Model 12-W aircraft, however.□

Dan Hagedorn (SAFCH #394), 13125 Pennerview Lane, Fairfax, VA 22033, USA.

Captions for photo on pages 143-144

A. This view of a Curtiss-Wright 16-W for Brazil shows the robust undercarriage construction and the distinctive Brazilian national insignia under the lower starboard wing. (Bert Kemp, Gordon S. Williams Collection, Museum of Flight)

B. A single Brazilian Curtiss-Wright 16-W survives in the outstanding collections of the Brazilian Air Force Museum at Campo dos Afonsos near Rio. Marked K 178 and in C.A.M. (Correo Aereo Militar, or Military Air Mail) markings, the aircraft is in excellent condition, (Museum Aerospacial, Rio de Janeiro)

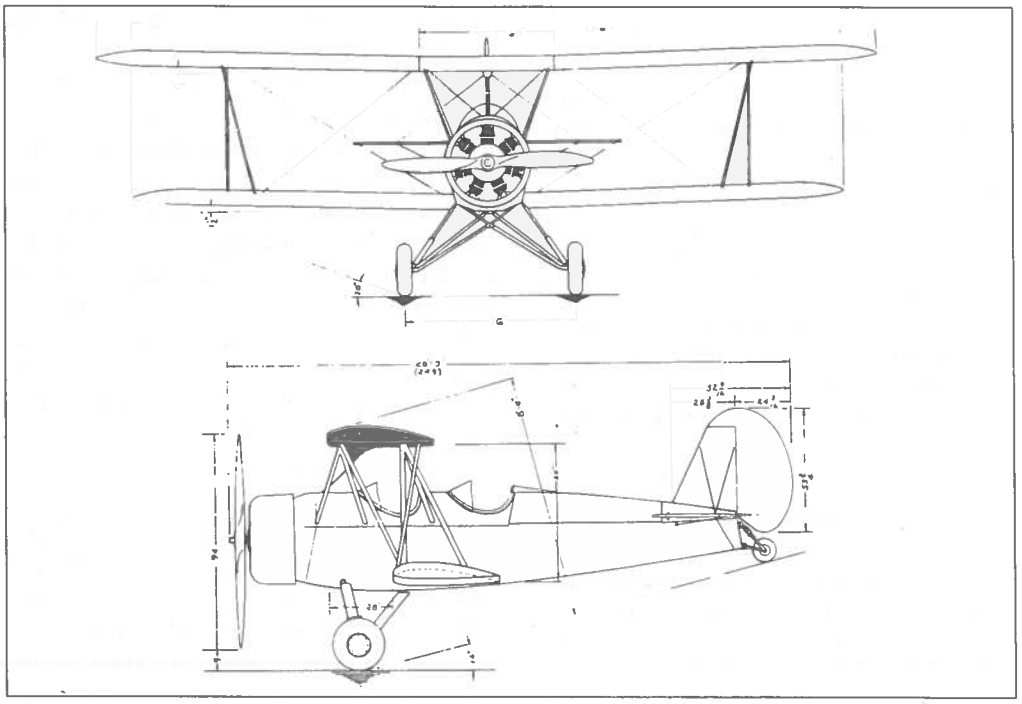
C. Although of poor quality, this lineup of four Brazilian Army Curtiss-Wright 16-Ws, including K 180 and K 184, reveals that they had yellow wings and horizontal tail surfaces, the Brazilian national insignia I four positions, and the cowling and upper decking were painted as well, although the color unknown. (Museum Aerospacial, Rio de Janeiro)

D. One of the original nine Curtiss-Wright 16-Es for Ecuador, serial number 14 as it appeared just before delivery. Note the "Curtiss-Wright" circles logo on the vertical fin and wheel hub. The engine cowl is polished aluminum while the fuselage is doped aluminum with a red cheat line. Note the fold down-access panels. The Ecuadorian colors were, from top to bottom, yellow, blue, red. (via Jorge Nunez Padin)

E. Incredibly, this Argentine Navy Curtiss-Wright 16E, codes '1-E-11', was rebuilt following an accident on Noverber 4, 1937, involving crew Ensigns Monzon and Balaguer! It I seen here at Puerto Belgrano Naval Air Station. (via Jorge Nunez Padin)

F. A number of Argentine navy CW-16Es survived to pass to Argentine civil markings, including LV-HHM seen here. Given as manufacturers serial number '35', this is obviously a contraction of the actual serial. (via G. Kuhn)

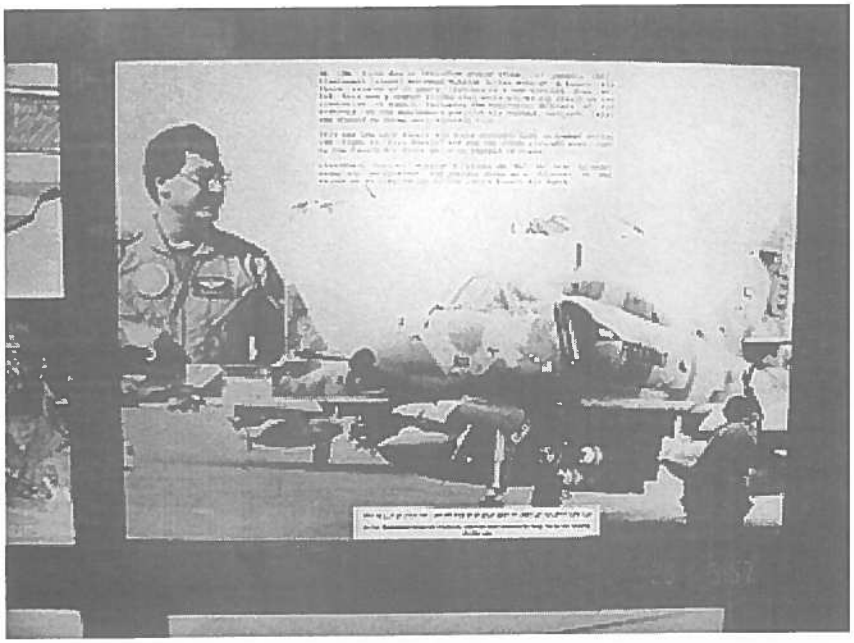
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The Curtiss-Wright Model 16-W. Credit: Curtiss-Wright


KUWAITI PILOT MOHAMMED MUBARAK
اول طيار اسير في حرب تحرير الكويت
المقدم طيار / محمد مبارك سلطان من
المشاركين في عملية درع الصحراء - عاصفة الصحراء

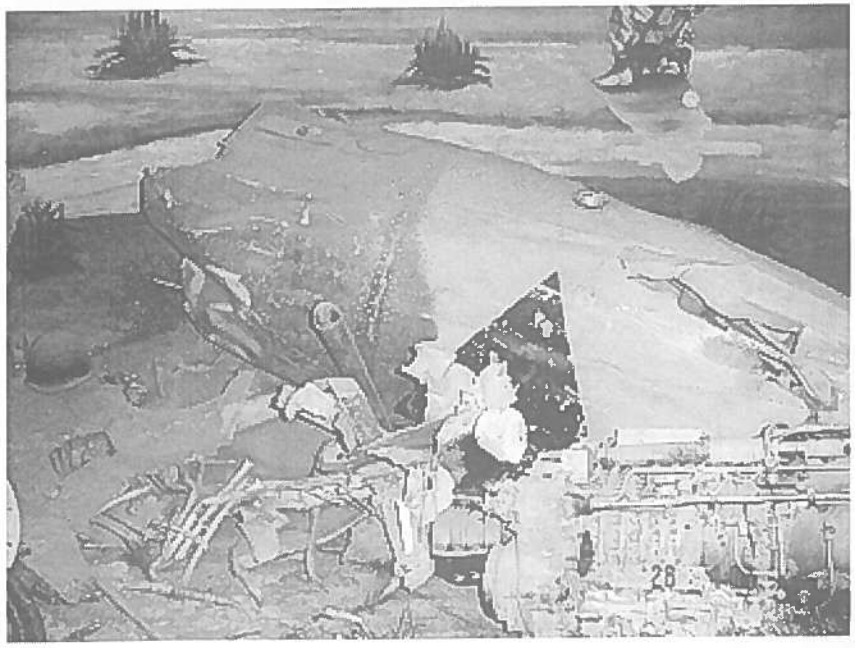
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MIL-17 من نوع
SAM-7 بصاروخ أرض / جو من نوع
1990 أغسطس
THE REMAINS OF AN IRAQI HELICOPTER. THIS RUSSIAN BUILT MIL-17 HELICOPTER
OWNED AND PILOTED BY IRAQ WAS SHOT DOWN BY A KUWAIT AIR DEFENSE
BRIGADE SAM-7 MISSILE ON 2AUGUST 1990 IN THE SUBIYAH AREA

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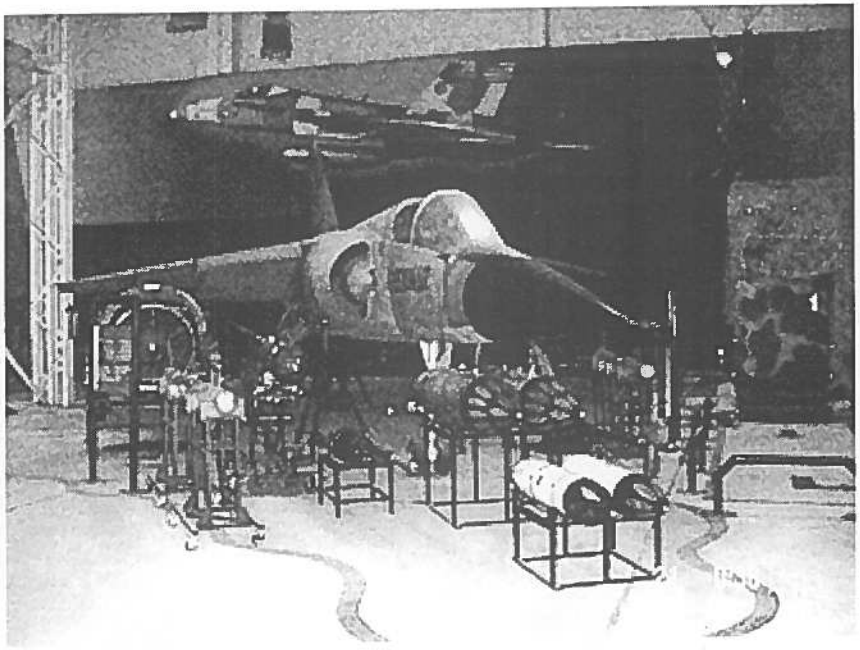
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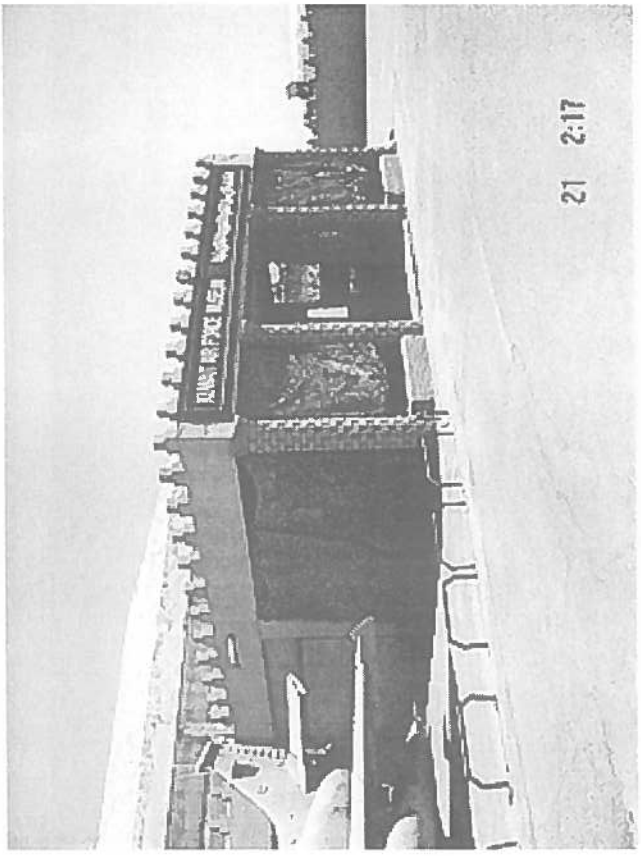
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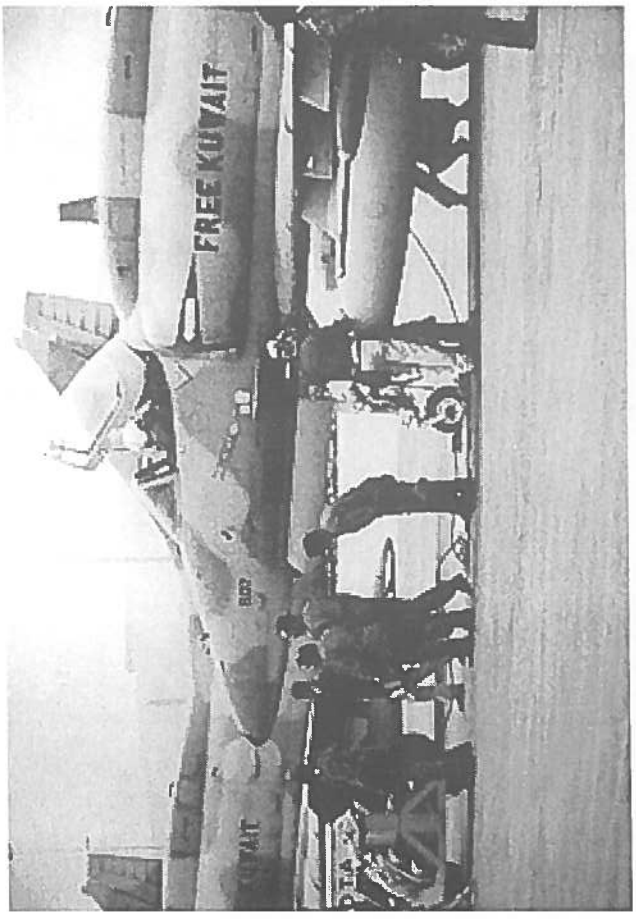
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Arado Ar 95 in Chilean Service

Doug Dildy

Originally designed as a ship-based torpedo-bomber for the still-born German aircraft carrier Graf Zeppelin, the Arado Ar 95 was a single-engine biplane that could be operated from floats or wheeled landing gear. Five prototypes were produced—four with twin floats, one with trousered landing gear—powered by either 880-hp nine-cylinder BMW 132D or similarly-rated Jumo 210 radial engines.

First flown in 1936, the Ar 95 proved to have a disappointing performance, capable of a maximum speed of only 171 mph at sea level. Nevertheless, half dozen pre-production Ar 95A three-seat floatplanes were acquired and were sent to the Spanish island of Majorca to provide a maritime reconnaissance capability for Germany's Condor Legion supporting Franco's Nationalist forces in the Spanish Civil War. The three survivors from this expedition were transferred to Spain's new Ejército del Aire at the end of the conflict.

The type was subsequently marketed as two-seater Ar 95W (wasser for floatplane) and Ar 95L (for the landplane version). Turkey ordered a dozen Ar 95Ws, but upon Hitler's invasion of Poland in 1939 the Luftwaffe took over the order and used them to equip a single squadron, 3.Staffel/Seeaufklärungsgruppe 125 ("3rd Squadron, Sea Reconnaissance Group 125"), in the Baltic Sea. These later saw some action during Hitler's invasion of the Soviet Union, reportedly being operated over the Gulf of Finland by an Estonian volunteer squadron.

The Fuerza Aérea de Chile (FACh) purchased nine Arados of the two versions (sometimes referred to as Ar 95As and Ar 95Bs respectively). These were delivered on or about 22 November 1938 and were assigned to the Grupo de Aviación No.II based at El Quintero air base near Valparaiso, the traditional location of Chilean naval aviation. From the photographs it appears the Arados were delivered in overall RLM Gray with black serial numbers (#1 through #9) on the fuselage and standard FACh wing insignia and rudder marking.

Grupo II was the naval co-operation group of the II Brigada Aérea (one of the two "air brigades" at that time) which had previously used Fairey IIIF floatplanes and still possessed the leftovers of eight Dornier Wal flying boats. The Arado was a major improvement over the unit's previous equipment and was used as both floatplane and landplane. For example, while Photo A accompanying this article shows aircraft #1, #2 and #3 as Ar 95Ls, other evidence shows these three—and #7—on floats.

During the first two and a half years, two examples (most likely #6, #8 and/or #9) were probably lost to causes unknown because the 1 July 1941 U.S. Air Attaché air order of battle (AOB) shows seven of the type on strength, all with Grupo II. These must have experienced heavy use because the AOB of the following July shows six on charge, but only one was still in flying condition—and it had been re-engined with an American Pratt & Whitney radial! The others were non-operational due to lack of spare parts. Given the wartime situation of Germany in 1942—half a world away, blockaded by sea and fighting a land war on two fronts—it is not surprising that the source of Arado spare parts had dried up.

Fortunately Chile sided with the Allies and this small contingent of Ar 95s was soon supplemented with 15 Vought OS2U-3 Kingfisher observation floatplanes in 1942 through the U.S. Lend Lease program. Additionally three Consolidated PBY-5 Catalina flying boats were provided to replace the surviving Dornier Wals.. The remaining half dozen Arados languished through the rest of WW2 and afterwards, like many other obsolete and surplus types, they were administratively assigned to FACh headquarters at El Bosque. The last mention of the type is on the 3 December 1946 AOB where three are shown "on strength", but with no word on condition.

In the big scheme of 100+ years of aviation history, the Arado 95 was an unremarkable, almost incidental, design but it served in the maritime reconnaissance role in two small air forces. Its Chilean service was unique in that both the float and the wheeled versions were employed. And it is noteworthy that, in Chilean service, it outlasted—by use of an American engine—its Luftwaffe, and maybe even its Spanish, counterparts!□

FACh Arado Ar 95 Specifications

Engine: 880-hp BMW 132Dc

Dimensions: Length 36 ft 5 in (11.1 m); Span 41ft (12.5 m); Height (Ar 95W): 17 ft (5.2 m)

Weight (Ar 95W): Empty 5,588 lb (2,535 kg); Loaded 7,843 lb (3,558 kg)

Performance: Ar 95W: Top Speed 171 mph (275 km/hr)
Ar 95L: Top Speed 187 mph (300 km/hr)

Armament: One forward firing synchronized 7.92-mm MG 17 in the upper cowling and one flexibly mounted 7.92-mm MG 15 in the rear cockpit.

Combat Load: One 1,487 lb (700 kg) torpedo or six small (110 lb/50 kg) bombs

Captions for photos on page 110. (Photos are from the Thijs Postma Collection.)

A. The first three examples of the Ar 95 two seat maritime reconnaissance biplane in Chilean markings. This is probably an Arado factory photo and shows them in their Ar 95L (landplane) guise. The paint scheme seems to be overall RLM Gray with black serials and standard Chilean tail flash.

B. These may be the same three Ar 95s (#1, #2 and #3) shown in the Ar 95W (waterplane) configuration, and is perhaps another Arado factory photo. The "gun barrel" looking device extending beneath the empennage is a step used by the aircrew to climb into the rear cockpit.

Acknowledgements: Thanks to Dan Hagedorn (SAFCH #394) for his generous assistance in supplying the details of Ar 95 service history in the FACh.

Other Sources

"The Chilean Air Force... An Air Arm with a Problem", by Salvador Mafé Huertas, Air International, Vol 26/#2, February 1984, pp74, 91, 98.

Combat Aircraft of World War Two, by Elke C. Weale, John A. Weale, and Richard F. Barker, London: Bracken Books, 1977, pg 101.

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Portugal's Osprey

Alex Crawford

In 1934 the Portuguese Navy ordered two sloops from the UK. As part of the sale each ship included one Hawker Osprey two-seat fighter/reconnaissance aircraft. The sloops, *Alfonso de Albuquerque* and *Bartolomeu Dias*, were received in 1935 and 1936 respectively. The Ospreys received the serial numbers 71 and 72. In 1937 the two Ospreys were shipped aboard the *Alfonso de Albuquerque* to the Centro Aviação Naval (CAN) Macau in the Far East. These arrived on 22 October that year.

The CAN was created in 1927 in an effort to counter the piracy and smuggling in the waters of the Pearl River. The first aircraft received were three Fairey seaplanes, serials 17-19. A hanger was built on the south side of the Island of Taipa to house the aircraft. The aircraft first flew in 1928 and carried out a number of flights at the request of the French authorities at Hanoi and the British at Hong Kong. Two years later the aircraft were transferred back to Portugal, although at the insistence of the governor two were retained at Macau. In March 1932 the CAN was closed and the station was shut down a year later.

With the Japanese invasion of China it was decided to re-open the station at Macau and the two Ospreys were sent out. The hanger was refurbished to accommodate the new aircraft and the CAN was reactivated in 1937. Four months later, in December, a further four Osprey arrived, these aircraft being fitted with floats. These aircraft may have been ex-RAF/FAA but their identities have yet to be discovered. The Ospreys received the serials 1-6. In order to house these new aircraft a further hanger was built near the Outer Port. A further two Ospreys, serials 7-8, were purchased direct from the Fleet Air Arm in 1941. Again these have yet to be identified.

With the onset of war in the Pacific, Macau was virtually cut of from the rest of the World and especially Portugal. Funding to keep the Ospreys airworthy was cut to a minimum and as such virtually no flying was carried out. As Macau did not pose a threat to the Japanese, it was left alone.

On the 26 June 1942 one of the Osprey, #6, crashed into a terraced house in Tap Seac. The pilot, 1Lt Rodrigo Henriques Silveirinha and the observer 1Sgt Macedo Girão both died in the crash. A total of five houses were destroyed and one Chinese woman was killed, while a further 16 civilians were injured. The Osprey was reported to have been dropping leaflets over the city, possible to reassure the people that they were under no danger from the Japanese. With the death of Silveirinha there was only one pilot left in Macau and his high blood pressure prevented him from flying. In November 1942 the CAN was suspended and no more flying took place. The Ospreys were probably left to rot in their hanger, as due to the almost total isolation they would not have been able to ship them back to Portugal. It has also been reported that the surviving Osprey may have been destroyed in a raid by American aircraft in 1941/42, but so far details are unclear.

Colour and markings

The Osprey's in Portuguese service were aluminium overall with highly polished metal fuselage panels. National markings consisted of the Portuguese Cristo Cruz above the wings only. The rudder was stripped green/red with the Portuguese coat of arms placed on top. The ship names were in black on the forward fuselage. When the Osprey were shipped to Macau they received another Cristo Cruz on a white square on the fuselage and a normal Cristo Cruz roundel under the wings. The ship names were removed and the serial numbers (1-6) were painted on the forward fuselage below the exhaust and below the tailplane.

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Modeling the Avro Lancaster in REAF Service

Robert A Meguid

The AVRO Lancaster led a monumental service career with the RAF during WWII. However, it soldiered on long after it had dropped its last bombs on Europe. Hasegawa's recent 1/72 scale release of the crisply-molded Lancaster has stirred new interest in the subject by decal and after-market parts manufacturers. Notably, Xtradecal (distributed by Hannants of the UK) has released a series of decal sheets on post-War Lancasters. Sheets X72061 and X72062 offer schemes for RAF, French Aeronavale, RCAF, Fuerza Aerea Argentina, and Royal Egyptian Air Force (REAF) aircraft.

Nine refurbished Lancaster B.Mk Is (alternately reported as B.Mk IIIs by some sources) were supplied to Egypt in 1950. They had been refurbished by A.V.Roe & Co, Ltd, at Bracebridge Heath. The nine Lancasters were ex-RAF aircraft PA476, PA441, SW308, TW893, PA435, PA391, TW890, SW313, and TW656, issued consecutive aircraft numbers 1801 through 1809, and test-flown as G-11-60 through G-11-68, respectively (1). They were delivered with functioning turrets, but stripped of guns. They equipped No.9 Heavy Bomber Squadron of the REAF, based at Almaza, and were re-armed by the REAF. By 1952, the operational strength has dropped to five Lancasters, and by 1955 only three were airworthy. It is doubtful that these ever saw combat service with the REAF, and they were replaced by Il-28s in 1955 (2).

Photographs of the REAF Lancasters are rare. Two photos of AC#1801 are in the reference (3), and two photos of AC#1808 were taken by the author's father at Almaza in the late 1950s. Profiles of REAF Lancasters can be found in reference (4) and

on the Xtradecal instructions (although neither are entirely accurate, see notes). This decal sheet and the Hasegawa kit form the basis for modeling the Lancaster in REAF service.

The Lancaster should be built up as a standard B.Mk I with the following specifications and additions, thankfully most of which are options on the Hasegawa kit: Use paddle-blade propellers, include canopy blisters for the pilot and navigator, use the larger nose blister, include the H2S radar, use un-shrouded exhaust pipes, delete the antennae that flank the nose on some Lancasters, add an ADF football antenna midway between the canopy and the upper mid turret, as well as two aerials along the fuselage (best seen in the profiles). Fuselage windows are not present, except for the square ones just above the wing root, so they will need to be filled. From the photos, the only visible structural difference between aircraft AC# 1801 and 1808 is the installation of the extended lower rudders on the former and standard rudders on the latter.

Sources report that the REAF Lancasters were painted in the RAF colours of Medium Sea Grey upper surfaces and spinners, and Night Black vertical and lower surfaces. The horizontal demarcation line is the same as on operational RAF aircraft. Extensive weathering in the desert sun faded the grey and the black is worn through to the underlying metal, as depicted on the photos of the derelict Lancaster at Almaza. 90 inch roundels are in four places on the wings. The roundels begin just behind the leading edge, extending most of the chord of the wing just to the ailerons, and coming to slightly beyond the outer limit of the aileron laterally. The crescents within the roundels face the stern of the aircraft (the opening of the crescent face towards the tail of the aircraft). From the existing photos, it can be determined that there are no white outer rings on the rounds, nor the royal crown in the outer green band. These roundels should be 1.25 inches in diameter for 1/72 scale models. The REAF roundels provided by Xtradecals are about 0.1 inches too small, making them about 84 scale inches. A better-sized roundel is found on Max Decals 3201 Exotic Lysanders Pt.1: two sets will be needed. Use decals #29 and 30 (these are just about right), and cover up the royal crown with decal scrapped from the Irish or Portuguese markings on the same decal sheet. The colour of the green in REAF roundels is consistently brighter in the majority of aftermarket sets than in the Xtradecal set (see Reference 5).

The nine REAF Lancasters were numbered 1801-1809 in Arabic script only. The aircraft numbers are painted in white on the lower surface of the wings, immediately inboard of the roundels. The number under both wings is in the same orientation, which can be read from below in the direction of travel of the aircraft (Xtradecal got this correct on the diagram of the port wing underside only). This can be seen in the photo of AC# 1808 taken from the front (author's collection). There is no photographic evidence to suggest that there are numbers on the upper surface of the wings. The Xtradecal numbers are well-sized, according to photographs: the four numbers are about 42 inches high and 80 inches wide all together. Xtradecal provides numbers for AC# 1804. Using two sets of Xtradecal X72062 will additionally enable the modeler to represent AC#s 1801, 1807, or 1808.

The roundels on the fuselage are located directly beneath the upper mid turret. They are reported to be 52 inches in diameter by reference (4). However, the upper edge just kisses the grey/black demarcation line, and the lower edge extends just below the longeron (the reinforcement that runs most of the length of the fuselage, just above the bomb bay doors). This would put the roundels at 46 inches, translating to 0.64 inches in 1/72 scale. Again, these roundels lack outer white rings and royal crowns. These roundels were omitted in the Xtradecal set. The best replacements can be taken from the old Esci 1/72 Suez Canal Conflict sheet: use the large solid-centered REAF roundels intended for the Gloster Meteor, and replace their centers with the crescent-and-star centers from the large REAF Spitfire roundels on the same sheet. An alternative is to use the large REAF roundels from the Mike Grant Decals 72-MG001 Foreign Gladiators sheet, however these will be slightly too small in diameter.

AC#s are located between the roundels and the tail planes. Again, they are white, and are well-modeled by the Xtradecal set (about 17 inches in height). AC#1801 has the numbers above the level of the tail planes, while AC#1808 has them below the level of the tail planes.

The fin flashes are reported to be 24 inches high and 36 inches wide, composed of three alternating 12 inch wide green, white and green bands. This translates into 0.33 inches high by 0.5 inches wide in 1/72 scale. In both sets of photos, the green extends to the leading edge of the fins. None of the photos reveal the inner sides of the fins, however it was customary for fin flashes to be on both sides of RAF, French Aeronavale, and some RCAF aircraft. Good color and size match for the fin flashes can be obtained by using those on the Mike Grant Decals 72-MG001 sheet, which are tall enough to provide enough decal for both sides of both fins. Centered below the outer fin flashes is the winged AVRO logo, nicely provided by the Xtradecal set.

Sadly, the fate of the REAF Lancasters is unknown. Presumably, befell the scrapper's torch, or faded into the sands of Egypt.□

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(1) Jackson, A.J. AVRO Aircraft Since 1908. London: Putnam, 1990.

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(3) "Warplane Classic: Lancaster", International Air Power Review, Vol.12 (Spring 2004), p.151. - 2 photos of REAF AC#1801 in the UK.

(4) Franks, R. The AVRO Lancaster, A Comprehensive Guide for the Modeller. Bedford: SAM Publishers, 2000. - colour profile

(5) Cochrane, J, and Elliott, S. Military Aircraft Insignia of the World. Annapolis: Naval Institute Press, 1998.

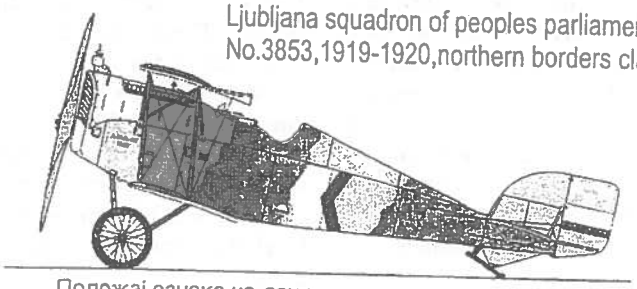
Robert Meguid (SAFO #1568), Baltimore, MD, USA

Photos of the Egyptian Lancasters on page 143 are by the author's father..

Авијатик Берг Д.1 серија 38 (Aviatik Berg D.I Ba.38)

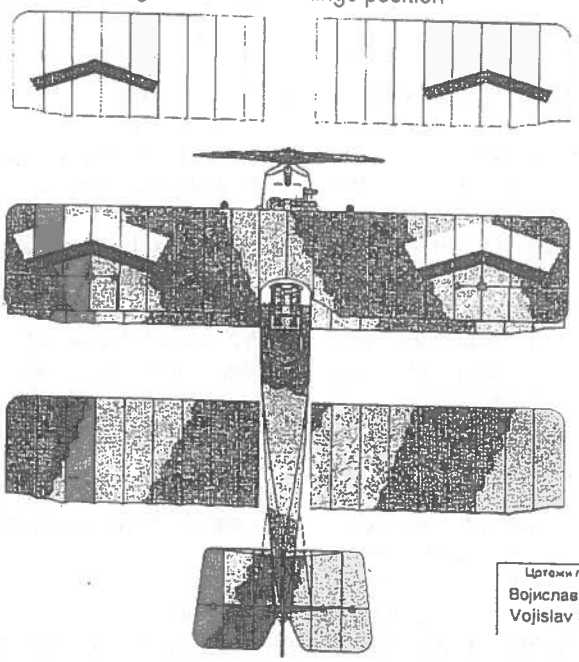
Љубљанска ескадрила-Ескадриле Народних Вијећа;
Пилот Франц Вогнер; Берг Бр.3853;
борбе око северо-западних граница 1919-20.

Ljubljana squadron of peoples parliaments,pilot Franc Vogner
No.3853,1919-1920,northern borders clashes.



Положај ознака на доњим површинама крила

Wing underside markings position



Цртежи / Drawings by ©
Војислав С. Станков
Vojislav S. Stankov

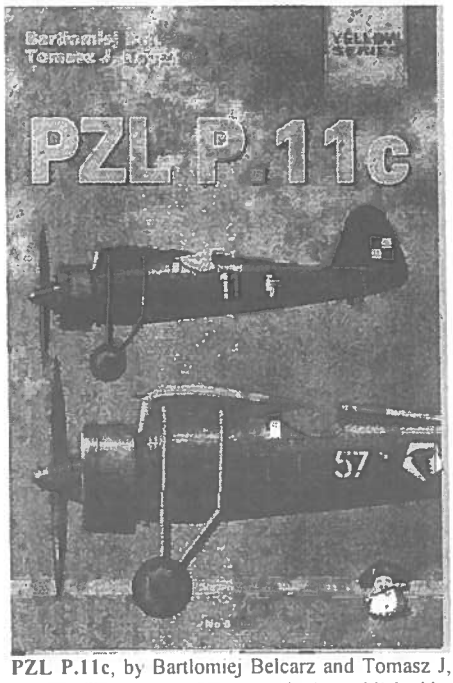
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Авион је по горњим површинама обојен у аустро-угарску двобојну шему бојења која се састоји од мрља окер (ФС.33440) и тамно зелене (ФС.34086) боје. Доње површине крила су у боји лакираног платна док су доње површине трупа у боји лакираног шпера.Капотажи мотора су тамно-сиве боје. Упорнице, дрљача и елиса су у боји дрвета док је натпис на левој страни носа са подацима о типу авиона и мотора у црној боји. Ознаке националне припадности су раног стреластог типа и налазе се на све четири позиције на крилима као и са обе стране трупа при чему је плава боја увек прва гледано од правца лета авиона.

Wing topsides are painted in standard KuK two tone scheme consists of Ochre FS 33440 and Dark Green FS 34086.Wing undersides are left in natural fabric tone,while fuselage undersides are in natural plywood tone.Engine cowling are Dark Gray..Other wooden parts are unpainted. Early arrow type national insignias on four wing positions and both fuselage sides ,blue/white/red with blue color always pointed in flight direction.

Reprinted from the Yugoslav magazine YASIG with the permission of their editor, Nenad Miklusev.

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PZL P.11c, by Bartlomiej Belcarz and Tomasz J, Kopanski. #6108 of the Yellow Series published by Mushroom Model Publications, 36 Ver Road, Redbourn, AL3 7PE, UK. E-mail: rogerw@waitrose.com. (2003), ISBN 83-917178-5-2. Also available from: Squadron Mail Order, 1115 Crowley Dr., Carrollton, TX 75011-5010, USA for $19.96 plus $4.95 postage in US. Non-US order add 30% for surface mail or 50% for airmail.

This reviewer's library contains a number of books on the Polish September Campaign in general and on PZL's gull-wing fighter, the P.11c in particular. While the books with Polish text contain lots of photos, excellent scale drawings, and beautiful color drawings (see Reference 1 below for the best of these), extracting information about the September Campaign is difficult for the reader with little knowledge of the Polish language. The books in English (See References 2-4 for the beat of these) cover the September Campaign quite well, but somehow seem to lack emotional impact. This recent book from Mushroom Model Publications has both excellent photo and drawing content and a text that absolutely "knocked my socks off". I suspect the reason for this emotional impact is the method of presentation: Each Fighter Fight (about ten P-11c) is covered in chronological order from Mobilization on 31 August until evacuation to Romania on the17th.of September. Every aerial action is described identifying the Polish airman by name and, whenever possible, the name and unit of the Luftwaffe opponent. The constantly moving to new landing groiunds and its effect of serviceability is vividly described. The Polish Fighter Units were not defeated in the air – they just ran out of airfields.

The other good news is that this book, consistinf of 128 pages A-5 size pages on high quality glossy paper bound between sturdy card covers, is very reasonably priced.

The chapter titles are: "Introduction" 2 pages including 4 photos. "Development" 5 pages including 7 photos. "Pre-War Operations" 10 pages including 13 photos. "P-11 Goes to War" 37 pages including 38 photos. "Royal Romanian Air Force" one page. 3 photos. "Other users" one page on German and Soviet P-11s. "Scale Plans" 4 pages of 1/48-scale multi-view drawings. "Color Images" 32 pages. "Colour Profiles" 33 pages.

Among the pre-war activities here-to-fore unknown to this reader was the shooting down of a Soviet R-5 "spy" plane in August 1936 by Witold Urbanowicz (of later fame with the Polish squadrons in the West), the participation of the PAF during the "Wilno" crisis with Lithuania in March 1938, and the Polish Air Force show of force during the conflict with Czechoslovakia in September 1938 over the disputed territory of Zaolzie.

The main part of the book, "P.11 goes to War" describes the day-to-day activities of each PAF unit flying the P.11. [The numbers in parenthesis indicate (number of pages, number of photos, and number of victories claimed)]: "111th Fighter Flight" (3,2, 8). "112th Fighter Flight" (2, 2, 5). "113th Fighter Flight" (5, 10, 9). "114th Fighter Flight" (3,3,6). 123rd (1,1,0). 121st (2,2,6). 131st (2,1,5). 132nd (2,1,17). 141st (3,3,8). 142nd (3, 2,10). 151st (1,0,0). 152nd (2,2,6). 161st (3,3,4). 162nd (4,7,7). The number of victories is particular impressive considering that a Fighter Unit consisted of only ten P-11s .

The photo section consists of 84 color photos of the P 11c at the Air Force Museum at Cracow and 12 b&w photos from the P.11c Instruction Manual.

A most delightful section of the book consists of color drawing - one from each unit operating the P.11c during the September Campaign (16 in all) each with two pages showing starboard-, port-, and top-view, with scrap views of the lower surface of the wing tips showing whether the national insignia had the white segments and showing the "call" letters. The colorful unit insignia are shown enlarged. [Editor: I doubt if any modeler will build a model of the P-11c in the markings of each unit that used it the September Campaign – but it would be an impressive collection.] In addition, there are four color side-view drawings, one of the a/c of General Ludomil Raysky, one of the a/c of Lt. Col. Boleslaw Stachon. one a/c in Romanian markings, and one in Hungarian markings.

Of special interest to this reviewer is the information on Polish aerial activities against the invading Soviet forces: E.g., On 16 September, 2nd Lt. Tadeuz Koc (161th) shot down a Soviet R-5 reconnaissance aircraft. On 17 September, 2nd Lt. Zatorski (113th) was attacked by three Russian fighters; he manages to damage two enemy a/c, but was shot down and died of his wounds.

One final point. Over the years there has been considerable controversy over the legitimacy of the "two-tone" camouflage applied to a P-11c. An oft-published pair of photos showing such a pattern has been dismissed by most Western sources as being the product of German propaganda. However, these two photos are reproduced in this book, with the caption describing the a/c to be code 62-W of 152nd Flight. And, a multi-view color drawing shows this a/c with a "green" splinter camouflage applied over the Polish "khaki". Assigning the code 63-W to this aircraft (not visible in any of the photos) indicates the authors' confidence in the legitimacy of this color scheme.

This book is highly recommended to all aviation enthusiasts. It will give you a new appreciation of the bravery of the Polish Air Force in the September Campaign. It should completely dispel any remaining belief that the Polish Air Force was destroyed by the Luftwaffe during the first days of the war.

References:

1. *PZL P.11*, Andrzej Glass, Tomasz Kopanski, and Tomasz Makowski. Monographie Lotnicze, #36 (Part 1) and #37 (Part 2). AJ Press(1997).
2. *History of the Polish Air Force 1918-1939*, Jerzy Cynk. Osprey (1972).
3. *The Polish Air Force at War, The Official Hisotry: 1939-1943*, Jerzy Cynk. Schiffer Military Books (1998).
4. *White Eagles: The Aircraft, Men and Operations of the Polish Air Force 1918-1939*, Bartlomiej Belcarz and Robert Peczkowski. Hikoki (2001).



PZL P.23 Karas, by Tomasz J, Kopanski. #8101 of the Orange Series published by Mushroom Model Publications, 36 Ver Road, Redbourn, AL3 7PE, UK. E-mail: rogerw@waitrose.com. (2004), ISBN 83-89450-03-8. Also available from: Squadron Mail Order, 1115 Crowley Dr., Carrollton, TX 75011-5010, USA for $19.96 plus $4.95 postage in US. Non-US order add 30% for surface mail or 50% for airmail.

This book is the near twin of the P-11c book discussed above. However, there are some differences. There are 144 pages, more multi-view scale drawings (9 pages in all) covering the PZL.23A, PZL.23B, and PZL.43, and 9 scale side-view drawings showing the development of the a/c.

Chapter titles are: "Development" 11 pages, 7 photos. "Export" 3 pages, 4 photos. "Use in the Polish Air Force prior to WWII" 7 pages, 21 photos. "German Invasion of Poland in 1939" 23 pages, 45 photos, "Evaluation of the Aeroplane", one page. "Foreign Service", 8 pages, 13 photos. "Detail Photos & Scale Plans" 38 pages, 85 photos (mostly from Instruction Manual). "Colour Profiles" 32 pages.

The color drawings are again outstanding. There is a drawing of one a/c from each Battle Flight (*Eskadry Liniowe*) on two pages with port-, starboard, and top-views, with scrap views of the underside showing whether the national insignia has the white segments or not and showing the placement of the "codes". There is also an enlarged drawing of the colorful unit insignia. Eleven Polish

PZL.23B are shown in this manner including two PZL.23A of the Air Force College at Deblin and one PZL.23A of a Training Flight. Side-view drawing are provided for 3 other Polish PZL.23B. The Romania PZL.23B are represented by one two-page multi-view color drawing and 4 side-view drawings. The Bulgarian PZL.43 is depicted in 4 single-page multi-view drawings and one side-view drawing. This section ends with a side-view drawing of a PZL.43A in Luftwaffe markings.

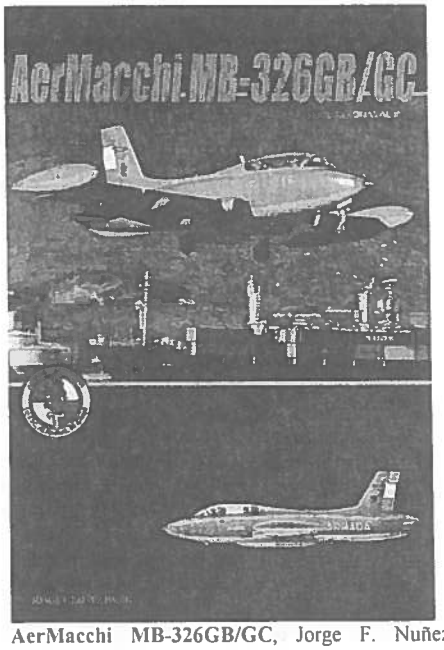
As with the PZL.11c book, the main section of this book is devoted to a chronological description of the activities of each Battle Flight, including the names of the Polish crew invoil;ed in the action and, when available, information on the Luftwaffe personnel involved. A particularly illuminating paragraph at the end of each Battle Flight entry is an accounting of the Polish crew members killed, wounded, or taken prisoner, the number of PZL.23 lost, and the number evacuated to Romania.

An interesting sidelight is the confirmation that the Battle Flight's PZL.23B were supplemented during the Campaign by a few RWD.14 Czapla, LSW.3 Mewa, and PZL.43. In fact, one Mewa serving with the 24th Flight was shot down by Soviet fighter on 17 September, but the crew of S/LTS Ronoszek and Sobieralski survived.

Other unusual occurrences of note are: (1) The gunner of a Karas of the 32nd Flight Karas, Cadet Off. Czeskaw Maslankiewicz, shot down a Hs 126 on the second day of the war. (2) The only report of "fratricide" was on second day of the war when a Karas of the 42nd Flight was attacked by two P.11c fighters of the 141st Fighter Flight. The observer was killed, but the pilot and gunner survived. The a/c was destroyed.

The PZL.23 book is highly recommended to anyone who wants to get a better understanding of the Polish Air Force during the September Campaign. The library of every aviation enthusiast would be greatly enhanced by the addition of the both the PZL.11c and PZL.23 books. I hope Mushroom Model Publications .is planning to publish a book on the PZL.37 Los.

Reference: *P.23 Karas*, by Tomasz J. Kopanski and Krzysztof Sikora. Monographie #23, AJ-Press (1995).



AerMacchi MB-326GB/GC, Jorge F. Nuñez Padin. Serie Aeronaval #20. E-mail: marauder@satlink.com. Web site: www.fuerzasnavales.com.

This, the latest in friend Jorge's series of monographs on Argentine naval aviation, follows his usual format of 32 A-5 side pages of Spanish text and photos beautifully reproduced on the highest grade glossy paper resulting in Kodak-quality color prints. Chapter heading are: "Historia" 4 pages; "Operaciones Campaña 1982" 3 pages including a table "Situacion aviones MB-326GB/GC & MB-339AA al 27 Septiembre 1983"; "Técnica" 4 pages; and "Historias Individuales" 5 pages. If you had no trouble translating the chapter titles, but are still a bit leery of the Spanish text try your high-school Spanish on the following individual history: "0616/MB-326GM (msn 6456/197). Asignado a la 1° Escuadrille Aeronaval de Ataque como 0816/3-A-104. Primer vuelo em el país 11.69. Paso a ser 0616/4-A-104. Accidentado el 21.04.79 en proximidades de la Base Aeronaval Punta Indio, con destrucción total durante vuelo de instrucciòn, Piloto, Teniente de Corbeta Marcelo Delaygue muerto. Descargado por Resolución no 250/80'C'."

Illustrative coverage consists of 20 b&w photos, 14 color photos (including 9 at half-page size), and 5 color side-view drawings and one color top-view drawing. Color schemes illustrated include the light gray over white, blue gray over medium gray, and green and tan over light gray.

If you have other monographs in this series, you will need no further encouragement to add this volume to your collection. If you have not seen any volumes in this magnificent series, *AerMacchi MB-326GB/GC* is highly recommended for you consideration.

[Editor: *AerMacchi MB-326GB/GC* and other volumes of Jorge's Serie Aeronaval and Serie Fuerza Aerea Argentina, are available from the SAFCH Sales Service for $10.00 each postage included in the US (others add 10%). If you want a list of Sale items, contact the editorial office: A hard copy of the list by surface mail is $1.00 ($2.00 via airmail). If the list can be sent to you via e-mail, it is free.].

[Editor: Back in SAFO #106 (October 2000), we published a review by SAFCH member Walt Noiseaux of the *Profiles in Norway* #1 on the Caproni Ca.310. Now, thanks to the generosity of SAFHCH member Tom Hampton, we have the first two issues of this series at hand for an in-depth review.]



Caproni Ca.310, Profiles in Norway #1. Arild Kjaeraas, PO Box 119, N-3162 Andebu, Norway. E-mail: www.proinor.no.

The Ca.310 was an attractive Italian twin-engine bomber/reconnaissance aircraft that saw considerable service with the *Regia Aeronautica* as well as several small countries. Norway acquired four of these aircraft from Italy in exchange for dried cod. his transaction earned them the nickname *Klippfisk*-bomberen (Dried Cod Bomber). The four Ca.310 were flow to Norway in October 1938. Two Ca.312bis (the version with an un-stepped, completely glazed nose) where also ordered from Italy and, although photos show them in Italy with Norwegian markings, it is unknown if they arrived in Norway.

This soft-bound booklet consists of 32 A-4 size pages devoted entirely to the history of the Ca.310 in Norwegian service. The text, in parallel columns of Norwegian and excellent English, describes the service history of the Norwegian Ca.310 before and during the German invasion including reminisces of a pilot who flew the Ca.310. This text is supplemented by 23 well-reproduced photos, and 6 beautiful color side-view drawings [Ca.310 (5) & Ca.312]. There is an excellent 2-page 1/72-scale 4-view drawing that illustrates the little-known 22-cm extension of the starboard wing designed to counter the effect of torque. The technical description of the Ca.310 is supplemented by 7 sketches reproduced from the original Instruction Manual, Five color photos show bits and pieces recovered from a crashed Norwegian Ca.310. The 1/72-scale resin Denko kit gets a scathing review.



Høver MF.11, Profiles in Norway #2. Arild Kjaeraas, PO Box 119, N-3162 Andebu, Norway. E-mail: www.proinor.no.

The second in the *Norway in Profile* booklets describes the Høver MF.11, a twin-float biplane seaplane designed and built by the *Marinens Flyvebåtfabrikk*. The first MF.11 flew in 1932 and proven superior to foreign types considered. The plane proved robust and reliable. One notable even was the flight in 1935 of MH.11 'F.308' from Norway to Spitzberg and back for a total of 4600 km. By the time of the German invasion in April 1040, 25 planes had been completed. Several planes were destroyed during the fighting. After the surrender of the Norwegian forces, one disappeared while attempting to reach Scotland and

three escaped to Finland. The *Luftwaffe* recovered several MF.11 that they used for mail and other communication duties.

This soft-bound booklet consists of 32 A-4 size pages. The text, in parallel columns of Norwegian and excellent English, describes the service history of the MF.11 before and during the German invasion as well as its service with the *Luftwaffe* and with the Finnish Air Force. This text is supplemented by 36 well-reproduced photos [Norway (26), Germany (5), & Finnish (5)], 6 color side-view drawings [Norway (3), Germany (2), & Finland (1)],. and a 2-page 1/72-scale 3-view drawing. The history of each individual aircraft is included. Five color photos show bits and pieces recovered from a crashed Norwegian Ca.310. The 1/72-scale vacuform Broplan kit is reviewed.

These two *Norway in Profile* are recommended to all enthusiasts of the small air forces. The review issues are available from the SAFCH at $15.00 postage included for US. (others add 10%).

[Tom Hampton. writes: "The are two other titles available: #3 Meserschmitt Bf-109T and #5 Arado 234B-2 (where #4 is, I'm not sure). The web site has a secure order form, along with postage rates, etc. The individual booklet in this series retail at about $17 and they come in about 10 days!"]

[Editor: The following review by SAFCH member Davis Legg first appeared in the January 2006 issue of *The Catalina News*.]

"First up is a new book on flying boats, specifically the Dornier Wal or Whale. Written by M Michiel van der Mey, **Dornier Wal- A Light Coming Over the Sea** describes in a good level of detail (and in English!) the entire family of Wal flying boats that emanated from the German designer Claude Dornier. The first members of what was to become the Wal family were built in Germany and Switzerland but, because of restrictions on aircraft production in Germany, production Wals were built in some number in Italy by CMASA and Finalmarina. Later, production did commence in Germany as well as by Aviolanda in the Netherlands and CASA in Spain. In the early 1930s, the USSR license produced Wals at Taganrog on the Sea of Azov, later the site of Soviet Catalina production and it is believed that around 60 were built there. All of these aircraft are described in appendices which also illustrate the considerable variety of power plants that the Wals were equipped with.

The various chapters cover the Wal's construction, notable flights carried out by Wals, military usage with particular emphasis on Dutch operations in the East Indies as well as those operated by Germany and Spain, subsequent Dornier Do 24 use by the Dutch and commercial operations including the mail flights using Wals catapulted from German ships in mid-Atlantic. I was surprised to learn how many countries used Wals - Argentina, Brazil, Chile, Colombia, Denmark, Germany of course, Italy, Great Britain, Japan, Netherlands, Norway, Portugal, Spain, the Soviet Union, Sweden, Switzerland and Yugoslavia with the USA being a near-miss! Dornier himself said that "The Wal made Dornier" and, incredibly, one of the Wal's successors, a Dornier Do 24, is still flying and is reaching the end of a world tour, albeit powered by modem-day turboprops mounted on a high-tech wing!

The whole of this 224 page soft-back is packed with black and white photos, many of which I suspect are rare and sourced with great tenacity by the author. I always feel that authors who put such effort into ground-breaking subjects are to be applauded and this is a fine example of the genre. The book is published by LoGisma in collaboration with the Museo Aeronautico 'Gianno Caproni' di Trento and is best obtained via the Dornier Wal Documentation Centre which is, in any case, worth a visit. This can be found at www.dornierwal.de.tf. Oh, and the book's subtitle *A Light Coming Over the Sea?* – it's a quote from Dante's *Divine Comedy*!

Verluste der deutschen Luftwaffe in Osterreich September 1943 bis Mai 1945. (Losses of Luftwaffe in Australia September 1943 to May 1945.), by Hans Handig and Mag. Martin Handig. ÖFH Nachrichten Sonderhrft 30. Available from: ÖFH Nachrichten, a.Hd. W. Schroeder, Pfenninggeldgasse 18/2/14, A-1160 Wien, Austria. 24.40€ plus postage. Payment by IMO. "No checks accepted due to the high redemption costs."This is #30 in the ÖFH's *Sonderheft* series. It consists of 164 A-4 size pages bound in landscape format (to allow the tables to span the long dimension of the page), and differs from previous *Sonderhefts* reviewed in SAFO in that the paper is now high-quality glossy paper allowing for better reproduction of the photos.

The main section of the book consists of 115 pages of tables listing chronologically every Luftwaffe aircraft lost over Austria between September 1943 and May 1945. The details listed in the tables can be exemplified by one particular entry that caught my eye: [Columns heading are in bold; when the entry is not self-evident, my English translation is in italics.]: **Tag** 20.12.43; **Verband** JG 108; **Luftflotte** Lw Bfh Mitte; **Ort** (*location*) Bad Voslau (N); **Ursache** (*cause*) Absturz (*forced landing*); **Baumuster** Macchi C.202; **Werknumber Kennung** 7644+258; **Bruch (%)** 85; **Dienstgrad Funktion** Gefr F Anton Kasparek; **G/T/V/Vm** T; **Quelle** (*sources*) 777 Bl 108, 784/Bl 115, #6/25.12.43, Liste-Tropper. Entries that need special mention are described in the book. For example, under **Ort**, the (N) denote the Austrian Federal State to help the reader locate the city on a map printed on the inside of the front cover ('N' denotes the Niederosterreich). Under **G/T/V/VM**, the T denotes a non-combat fatality. Several appendices give translations of the abbreviations (e.g. the rank Gefr. is translated as Aircraftman 1st class equivalent to USAAF Private 1st class).

The 21 page photo section consists of 84 photos (4 to a page) of Luftwaffe aircraft in Austria - both intact and wreckage. The author certifies that these photos have never-before been published. Finally, there are 10 pages of Appendices giving sources and translation of the abbreviations used in the book. An English summary of the very-important Introduction gives the author's description of the methodology of the book.

The review copy was provided by W. Schroeder of the ÖFH (Austrian Aircraft Historians).

[Editor: The review copy of this book is available from the SAFCH Sales Service for $25.00 in US or $30.00 for surface mail outside the US. Write or e-mail for airmail rate.]

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Revi: This Czech magazine is difficult to review since its presentation is unique (but exciting) and the text is in Czech (but captions are also in English). To give an idea of the content, I've limited my description to articles of direct small-air-force interest, and to a brief description of the (extensive) color illustrations.

#47 Color photos of details: EA-6 Prowler (27); An-12 (18); and Aero L-39 (5). Color side-view drawings: P-61 Black Widow (5); Ki-32, Ki-48; Ki-84 (2); Lancaster (22); and Junkers J.1 (3).

#48 "Finnish D.21" 5 pages including 6 photos and 3 color side-view drawings plus 2 top views). Scale multi-view drawings: Ki-115. Color photos of details: Ki-115 (13). Color photos: Russian L-39 (11); and Vought F-8 Crusader (4). Color side-view drawings: Ki-115 (3 plus one top-view); Luftwaffe [Bf 109 (2), Fw 190 (2)]; and DH-2 (3).

#49 "Czechoslovak aircraft in Luftwaffe service" 5 pages including 14 photos and 3 color side-view drawings (Avia Ba-122, E-241 & Ab-101). "Finnish D.21" 7 pages including 3 color side-view drawings plus 2 top views and 14 color photos of details; Color photos: "VFA-146" (16); Color side-view drawings: [Chinese Hawk III, Japanese A5M & G3m); F-86 (4); Bf 109 (5 plus one top-view); Me 410 (3); and Camel (3 plus top view).

#50 "Finnish DC-2" 3 pages including 5 photos and 2 side-view drawings plus a top view. "Czechoslovak Spad XIII" 4 pages including 3 photos and 3 color side-view drawings plus a top view. "Israeli Mystere" 7 pages including 8 photos and 6 color side-view drawings plus 2 top views. EA-6 Prowler: 8 color photos and 21 b&w & 6 color photos of details. Color side-view drawings: Wellington & Liberator; Do 217 (2 plus a bottom view); Me 410 (2 Luftwaffe & one Soviet); and Ju 87 (2).

[Editor: The Revi magazines are reveived from the Czech Republic in payment for a SAFO subscription. I would like to turn these into cash by selling them for $4.00 each, plus postage ($2.00 for one in US). For non US or more than one issue, use the USPS Web Site (USPS.com) using 8 oz per issue. Or, write me for the actual postal cost. See the SAFCH Sales List for other available issues of Revi.]

Scramble #318, November 2005.

Scramble is a "spotter's" magazine with 160 A-5 size pages full of civil and military serial numbers and photos. The text is in Dutch with an occasional comment in English especially I the "Military Updates" chapter. An example of the latter from the section on Cuban Mi-8s, s/n 71 to 74: "These Hips served as Castro's personal helicopters, two were PS-models and two were T-models." Photos of small air forc interest in this issue include: Netherlands PBY; Spain C-130; Norway C-130; Switzerland F-5E; Greece T-41, C-130, A-7, F-86, TG-102, CL-415, F-104, Do 28, T-2E, & C-47; Hungary JAS39 & MiG-29; SAAF JAS39, Egypt K8; Zimbabwe K-8; Guinee Mi-8; South Korea F-15, F-5F & Il-103; Guatemala Beech 200; Iraq C-130; Malta Bulldog & Alouette III; and Argentina MS.760 & IA-50.

[Editor: Review copy courtesy of the editor of Scramble. The review copy is available from the SAFCH Sales Service for $10.00 or surface mail or $15.00 airmail.]

PZL/TFK P.24A, 1/72-scale injection-molded kit with decals. Broplan MS-100. Janusz Brozek, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

PZL P.24C, 1/72-scale injection-molded kit with decals. Broplan MS-101. Janusz Brozek, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

The Turkish Air Force used mainly two versions of the graceful gullwing PZL P.24. The P.24A and C were built in Poland for Turkey by PZL and in Turkey by KTF (Kayserie Tayyare Fbrikasi). (Turkey also completed four P.24s as Gs, but these are not the subject of the kits review here.) The main difference between the A and C is the P.24A was armed with two 7.9-mm machineguns in the wings and two 20-mm cannons in gondolas mounted beneath the wings, while the P.24C carried four 7.9-mm machineguns in the wings. Other differences are more subtle, consisting for the placement of the oil coolers (one on each side of the fuselage or both on the same side), an extended air intake under the cowling, etc. These differences are sometimes greater between a/c on the same series than between a/c of different series.

Since these two Broplan kits differ in only in the details, they can be reviewed together. Each kit consists of two large spures (molded in white styrene) and a smaller sprue (molded in green styrene). I'm surprised that the larger spurs are not identical in the two kits, but a close inspection shows some differences. The main differences between the A and C are found on the green spures. The parts are crisply molded with incised surface detail, but with a little more flash than expected from a modern short-run kit. Both spatted and bare wheels are provided, although most photos of operational Turkish P.24s show un-spatted wheels. Two vacuform canopies are provided in each kit just in case you ruin one.

The instruction sheets are typical Broplan: One side has a multi-view drawing showing the color scheme and markings for the aircraft featured on the decal sheet along with specifications and colors (with Hunbrol equivalents). The Turkish P.24s were aluminum overall with black serial numbers ('2009' and '2014' for the A), and an unnumbered a/c for the C. Construction information is provided by an exploded diagram, a longitudinal section through the engine and cockpit, and the layout of the sprues with the parts numbered.

The decals are the same for both kits. The 9-cm by 4-cm sheet provides four white-outlined red-square insignia, the red rudder with white crescent and star, two sets of numbers for the fuselage ('2009145'; you chose the digits), and the 'P.24^{A}' and 'P.24^{C}' for the rudder, and the PZL logo for the rudder. Although the P.24A kit is titled 'PZL/KTH', the decals allow modeling only the PZL-built a/c. If you want to model a Turkish-built P.24, the decals in Reference (1) include the fuselage numbers and the KTK logo for P.24C '2241'.

It is rather surprising, considering the similarity between the A and C, that Broplan didn't produce one kit with the differences provided on the third sprue. A modeler wanting to build both an A and a C would still have to buy two kits, and the packaging and distribution would have been much simpler. In any case, these are both excellent kits and can be built into a nice pair of models to add to either your Turkish collection or to your PZL.24 collection. Or maybe just add a Turkish a/c to your small air force collection. However, since there are differences even within the a/c of the A series and the C series, the meticulous modeler will want ot study the text, drawings, and photos in the references before putting glue to styrene.

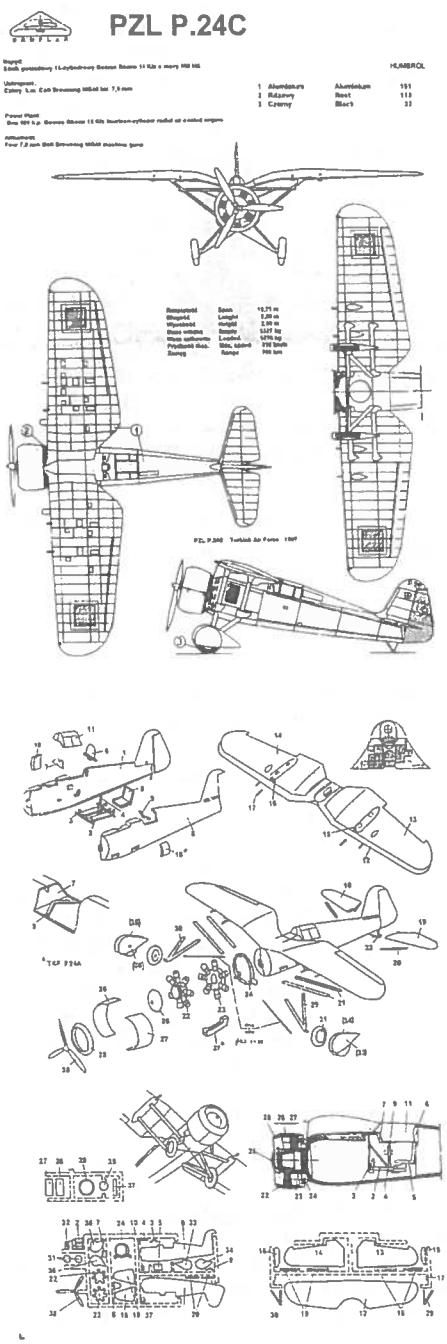
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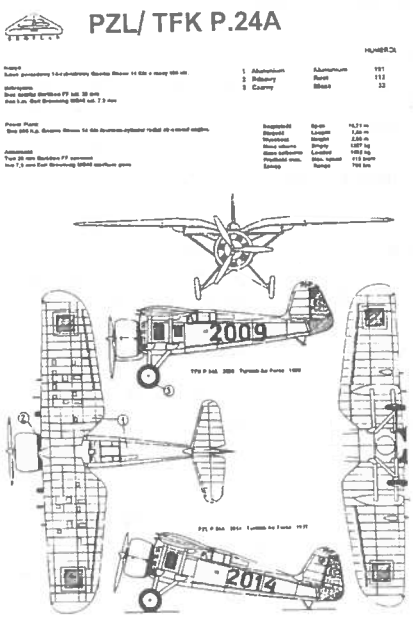
(1) PZL P.24A-G, Andrzej Glass. Kagero #7. Polish & English. Includes decals. (2004)

(2) PZL P.24, Przemyslaw Skulski. Seria 'Pod Lupa' #15, Ace Publications, Polish. (2002).

Review kits provided by Janusz Brozek of Broplan.

[Editor: These kits are available directly from Broplan at €18.50 each plus 20% shipping. The review kits are available from the SAFCH for $18.50 each postage to US included (others add 10%).]





Heinkel HD 24 Sk 4 (on floats), 1/72-scale vacuform kit with injection-molded parts and decals. Broplan MS-98. Janusz Brozek, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

The HD 24 was designed by Heinkel to serve as an elementary seaplane trainer. It served with the Swedish Air Force as the Sk 4. The Broplan kit of the HD 24 on wheels was reviewed a few issues ago (SAFO #113). Now Broplan has released the HD 24 on floats. The main airframe parts are crispy molded on white styrene sheets totally 23 cm by 23 cm for the main airframe parts and a small sheet (23 cm by 6 cm) for the floats. The surface detail is well done, especially the representation of the fabric covering on the wings and tail surfaces. Three small sprues of injection-molded green styrene provide the small parts including the propeller, seats, dual controls, and all the struts and bracing. These parts are well molded with just a hint of flash.

The decal sheet (100 mm by 40 mm) contains the black numbers '201' and '202' and six Swedish national insignia consisting for three black crowns. The white circles on which to place the crowns must be supplied by the modeler. The Light Blue/Yellow rudder stripes must also be supplied by the modeler.

The instruction sheet provides three-view drawings of Sk 4 '201' of the Swedish Air Force circa 1928. The color scheme is silver overall with bare-metal engine panels. An exploded construction diagram illustrates the complicated float supports and the interplane bracing. Interior detail consists of floor, two bulkheads, two seats, two instrument panels, and a set of controls. A drawing of a longitudinal section of the cockpits clarifies the position of all these elements. Also shown on the instructions is the layout of the vacuform and injection-molded parts identified by number.

The float version of the HD 24 is a surprisingly attractive aircraft that the Broplan kits accurately captures. The complicated float and wing bracing makes construction a challenge, and this kit is not recommended to anyone without

experience in building vacuform biplanes. However, with an unlimited amount of patience, the experienced modeler should be able to add a unique Swedish aircraft to a collection of seaplanes.

Review kit provided by Janusz Brozek of Broplan.

[Editor: This kit is available directly from Broplan for €21.00 plus 20% shipping. The review kit is available from the SAFCH]for $21.00 postage to US included (others add 10%).]

Blackburn Ripon (on wheels), 1/72-scale vacuform kit with injection-molded parts and decals. Broplan MS-98. Janusz Brozek, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

Two Broplan kits of the Finnish Ripon IIF (one on wheels and the other on floats) were reviewed in SAFO #112. These Finnish Ripon IIFs were powered by the Pegasus 9-cylinder radial air-cooled engine. Now Broplan has released a kit of the Ripon Mk.II powered by a Napier Lion liquid-cooled engine. These versions were used by the Fleet Air Arm almost exclusively aboard aircraft carriers.

The main airframe parts of the Broplan kit are crispy molded on white styrene sheets totaling 28 cm by 22 cm. The surface detail is crisp with the fabric detail on the wings and tail surfaces particularly well done. A pair of small sprues of injection-molded green styrene provides the small parts such as a propeller, wheels, wing and landing gear struts, and detail for the front cockpit (seat, instrument panel, and controls). These parts are well molded with just a hint of flash. Surprisingly, considering the large size of the opening, there is no detail for the observer's cockpit; the modeler will have to find a reference for this area and furnish the parts either from the proverbial spares box or by scratch building..

The instruction sheet, in the usual Broplan style, provides multi-view scale drawings of the three aircraft covered by the decals: (1) A Mk.II from the HMS *Glorious*, black '75' on yellow fuselage stripe, 1930/31. (2) A Mk.IIA of HMS *Courageous*, white '06' on light blue fuselage stripe, 1934,. And, (3) a Mk.IIC of HMS *Furious*, white '14' on red fuselage stripe with wing embellishments, 1934. An exploded view and a longitudinal section of the cockpit provide the necessary construction information. Drawings of the layout of vacuform and injection-molded parts identify each part by number.

The decal sheet is unique for Broplan in that it is large (145 mm by 105 mm) and colorful with colors consisting of red, light blue (for the fuselage stripes), red and dark blue for the roundels and fin flashes, and black serial numbers for the upper surfaces of the wing. The red appears a little too orange to me, but I am not an expert on RAF insignia.

The Broplan Blackburn Ripon Mk.II provides the modeler an opportunity to add a naval aircraft from a period when such aircraft where colorfully marked second in flamboyance only to the USN in the 1930s. It is highly recommended to any modeler building up a collection of naval aircraft. Any other modeler interested in colorful aircraft should give this kit serious consideration.

Review kit provided by Janusz Brozek of Broplan.

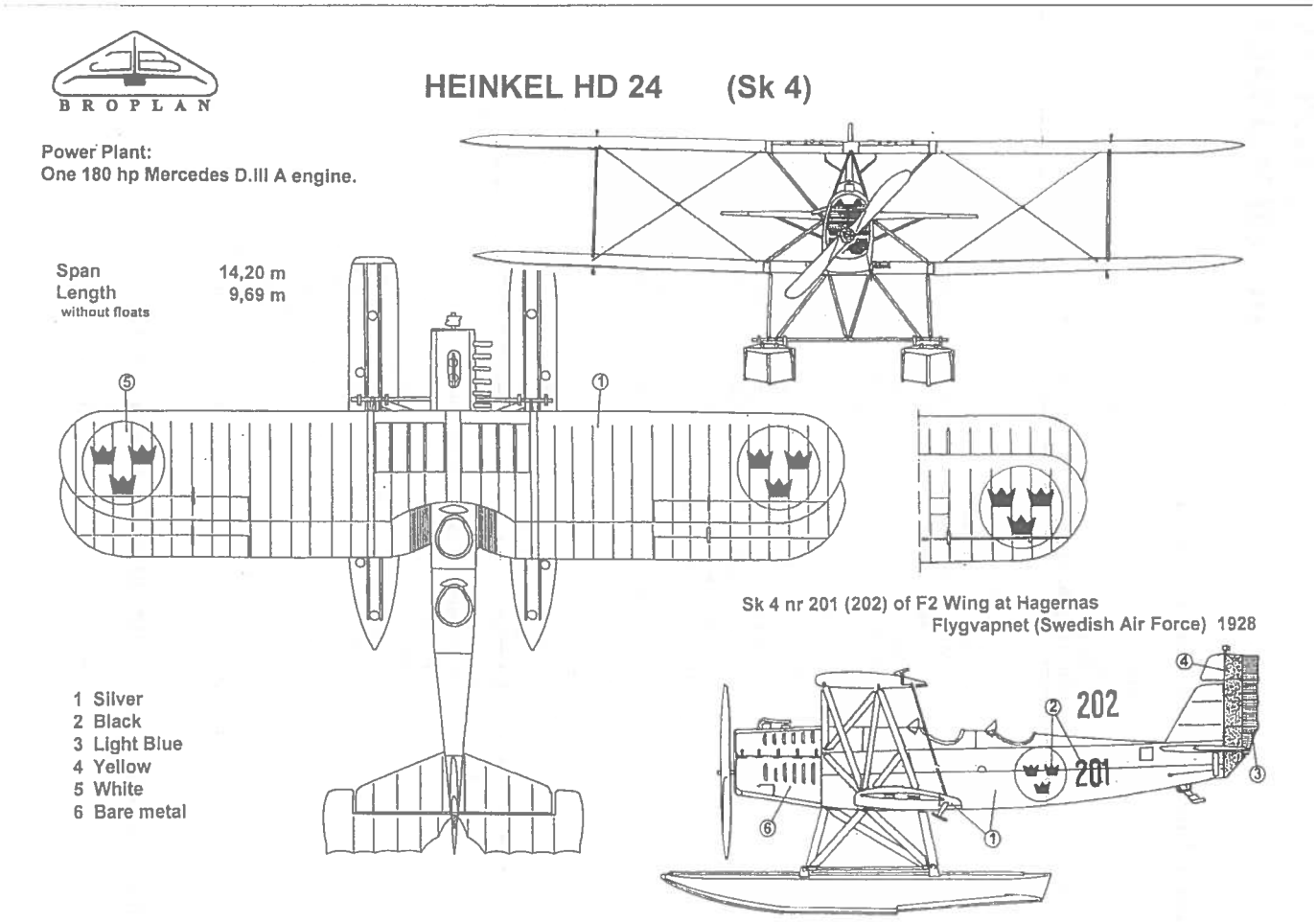
[Editor: This kit is available directly from Broplan for €20.00 plus 20% for shipping. The review kit is available from the SAFCH for $20.00 postage to US included (others add 10%).]

Saunders-Roe SR A/1, 1/72-scale vacuform kit of the world's first jet flying boat fighter.

This kit has been around for a long time, but is now available with decals. The kit has been around for a long time, and while good for its time, it is typical of the early vacuform kits.. Molded on two sheets (225 mm by 195 mm) of very thick white styrene, the parts are not as sharp as expected from more recent vacuform kits. However a female mode was used and the panel lines are inscribed. The vacuform canopy is clear, but devoid of details. There is no cockpit detail, but not much would be seen anyway since the canopy is so small. Although the kit is very basic, there is something appealing about building a vacuform model without having to worry about interior detail, a propeller, landing gear, and wheels.

The new decal sheet measures 65 mm by 90 mm and contains all national roundels, fin flash, serial numbers 'TG263' in two sizes, and yellow prototype 'P'. It is in perfect register, sharply printed in dense colors.

[Editor: One kit with decals are available from the SAFCH Sales Service. (This kit does have a defect: there is a small tear on one of the fuselage sides. This can be easily repaired.) This kit (with the new decals) is available from the SAFCH Sales Service for $10.00 postage included in the US (others add $2.00). In the unlikely event that someone releases an injection-molded kit of the SR A/1, I expect the price to be in the range of $30.00.]



KITS FOR MODELING
DUTCH MEIDAGEN '40 AIRCRAFT

Militaire Luchtvaart Combat Aircraft

Aircraft Type	Scale	Kit Company (notes)	Type	Reviewed
Douglas	1/72	Rareplanes (A-17)	Vacu	Unknown
DB-8A/3N		Czech resin (2) (A-17)	Resin	MIP95: 2: 45
		MPM	Inject	www-01
Fokker C.5d/e	1/72	Alpha (Belgian) (1)	Vacu	S#6: 65
"		Trucker's Mate (conversion)	Vacu	A20: 194
"		SAFCH/MAI	Inject	Unknown
"		Italian Kits (conversion)	Resin	www-02
"		Airmodel (conversion)	Vacu	Unknown
"		PH-Model (conversion)	Resin	www-03
"		Czech Master Resin	Resin	www-17
Fokker C.10	1/72	Alpha (1)	Vacu	Unknown
"		Vami-models (3)	Resin	Unknown
"		Czech Master Resin (4)	Resin	www-04
Fokker D.16	1/72	MW Models	Resin	S#111: 101
Fokker D.17	1/72	Classic Plane	Vacu	Unknown
"		Czech Master Resin	Resin	Unknown
"		Merlin Models	Inject	Unknown
Fokker D.21	1/72	Alpha (Belgian) (1)	Vacu	Unknown
		Lilac Rainbow House (Japan)	Resin	SAM10: 3:138
		PM/Pioneer 2/Matchbox	Inject	S#12: 113; A36: 42; www-05
		Frog/Novo/Siga	Inject	www-06
"		CMK	Resin	Unknown
"		MPM	Inject	AH14: 4: 56; www-07
	1/48	DMC	Resin	Unknown
"		Classic Airframe	Combi	S#19: 56; www-08
"		Czech resin (2)	Resin	Unknown
	1/32	ID Models	Combi	Unknown
Fokker F.7/3m	1/72	Broplan	Vacu	S#17: 58; SAM16: 2: 92
"		Frog "Southern Cross" (conv.)	Inject	S#17: 58
Fokker G.1	1/72	Airmodel	Vacu	Unknown
"		Rareplanes	Vacu	A15: 38; MIP78: 3+4
"		Private venture (Austria)	Resin	Unknown
"		Czech Resin (2)	Resin	Unknown
"		MPM	Inject	www-09
	1/48	CMK	Resin	Unknown
Fokker T.5	1/72	KPL Models (1)	Vacu	S#9: 79
"		O'Neill (1)	Vacu	Unknown
"		Rudel (1)	Vacu	Unknown
"		Czech resin (2)	Resin	MIP95: 1: 16
"		Xotic-72 / Aviation Usk	V+Inj	S#83: 102; www-10

Militaire Luchtvaart Training and Liaison Aircraft

Fokker S.9	1/72	Dujin	Resin	Unknown
"		Vami (LVA/MLD)	Resin	Unknown
Koolhoven	1/72	Dekno	Resin	BA9: 75
FK-51 "		Azur	Resin	Unknown
"		Special Hobby	Inject	S#114: 68
Koolhoven	1/72	Dujin	Resin	S#114: 68
FK-56 "		Vami	Resin	www-11
Bücker	1/72	Huma	Inject	Unknown
Bu 131 "		Airmodel	Vacu	Unknown
	1/32	Planet Models	Resin	www-12
De Havilland	1/72	Sky Birds (1)	Wood	Unknown
DH-85		Vami	Resin	Unknown
De Havilland	1/72	Rug Rat Resins	Resin	www-14
DH-90 "		Merlin Models	Inject	www-15
"		Airframe	Vacu	Unknown
"		Czech resin	Resin	Unknown
Focke Wulf	1/72	Karo-As	Inject	Unknown
FW-58B "		Airmodel	Vacu	www-13
	1/48	Karo-As	Vacu	Unknown
North American	1/72	CMK/Alliance (conversion)	Resin	Unknown
NA-27 "		Beechnut (conversion)	Inject	Unknown

Marine Luchtvaart Dienst Aircraft

Fokker C.7W	1/72	Chorosy Model-bud	Resin	S#115: 105
		Czech Master Resin	Resin	S#115: 105
Fokker C.11W	1/72	CMK/Alliance	Resin	BA#9: 77
Fokker C.14W	1/72	O'Neill (1)	Vacu	Unknown
Fokker T.8W	1/72	Wings '72 (1)	Vacu	Unknown
"		Aristo Craft (1)	Inject	Unknown
"		Cruver (1)	Rubber	Unknown
"		O'Neill (1)	Vacu	Unknown
"		Rudel (1)	Vacu	Unknown
"		Czech Resin (2)	Resin	Unknown
"		MPM	Inject	www-16

Notes: (1) Collectors items, most of these kit companies are no longer in business
(2) Models are of Czech origin. Some were released under an IPMS Neth/Master Models label. Many were later reissued under one of the MPM labels. S#25:126.
(3) Model is boxed as Fokker C.5.
(4) Model available as true Dutch C.10.

Sources Key: Magazine Volume (or Year): Issue Number: page number

Magazines are:
A = Air International
AH = Aviation History
BA = Battailles Aeriennes
MIP = Modelbouw In Plastic, IPMS Netherlands.
S = Small Air Forces Observer
SAM = Scale Aircraft Modeling

Web Addresses of Kit Reviews:

www-01 http://internetmodeler.com/2004/februari/first-looks/mpm_db8.php
www-02 http://www.italiankits.it/italiankits.htm
www-03 http://www.fortunecity.com/meltingpod/portland/971/d-f/fokker-cx-i.htm
www-05 http://m2reviews.cnsi.net/scotts/allies/d21.htm
www-06 http://www.ipms.nl/pim/erd21siga.html
www-07 http://www.fortunecity.com/meltingpot/portland/971/Inbox/d-f/fokker-d21-i htm
www-08 http://m2reviews.csni.net/scotts/allies/cad21preview.htm
www-09 http://www.sml.lr.tudelft.nl/~home/rob/models/GI.htm
www-10 http://www.internetmodeller.com/2003/april/first-looks/Xotic_Fokker.htm
www-11 http://www.koolhoven.com/scale/static

www-12 http://www.largescaleplanes.com/reviews/Kits/Golden/PlanetModels/Bu133
www-13 http://www.airmodel.de/gallery/attard/attard.htm
www-14 http://www.aim72.co.uk/DH86-90.htm
www-15 http://www.angelfire.com/d20/interaliagames/IASMS/DH90.htm
www-16 http://www.ipms.nl.pim/fokkert8.html
www-17 http://www.ipmsdeutschland.de/Firstlook.html (Fokker C.V-D RR)

Originally compiled by Dick van Faassen (SAFCH #1136) Zwolle, NL (1994)
Additions/Alterations by: Frans Scheve (SAFCH #890) Almelo, the Netherlands

PROFILES DRAWINGS OF DUTCH MEIDAGEN '40 AIRCRAFT

Militaire Luchtvaart Aircraft

Regiment	Squadron	Aircraft Profiled	Publication	Remarks
1.LvR	1.JaVA (D.21's)	#214	PR63: 11	Pre-Oct 39 markings
		#214	D.21: 40	Pre-Oct 39 markings
#221 with "3 White Mice"	D.21: 40	Neutrality markings		and "Boots with Points" *1.JaVA* Sqdn markings
		#223	PR63: 11	Neutrality markings
		#227	CK: 210	Depicted with both pre-Oct 39 and neutrality markings
		#234	CBCA: 17, 18	Neutrality markings
		#237	D.21: 24, 25	Neutrality markings
		#237	AI1: 155	Note: this aircraft lost in crash 22 Nov 39
		#237	AI13: 183	Caption in error: Says *2.JaVA*, Spring '40 Profile in error: Shows "White Mice" on cowling
		#237	EN: 83	Same as above.
		#237	CBF: 233	Same as above and caption in error: Says aircraft was at De Kooy in 1940.
		#237	AI36: 42	Same as above and caption in error: Says aircraft was destroyed in hangar at De Kooy on 10 May 40.
		#237	BA9: 19	May 1940 markings, 3-view color profile.
		#242	VT: 90	Combat painting of action on 10 May 40
		#241	WE: 59	Neutrality markings
	2.JaVA (D.21's)	#213	AI36: 42	Pre-Oct 39 markings
		#213	CBF: 233	Pre-Oct 39 markings
		#213	KL: 20	Neutrality markings
		#229	AN: 1218	Black/White line drawings
	3.JaVA (G.1's)	#307	MU: 90	Caption in error: #307 actually at *Jachtschool*, de Vlijt
		#319	VT: 65	Neutrality markings
	4.JaVA	#301	HE: 168	Pre-Oct 39 markings
	(Mercury G.1's)	#302	BA9: 25	May 1940 markings, 3-view color profile.
		#308	KL: 20	Neutrality markings
			LW2: 5: 48	On 13 May 40 attack on Moerdijk bridges
		#312	NVE12: Cover	Pre-Oct 39 markings
		#313	WE: 59	Pre-Oct 39 markings
		#314	AI7: 242	Pre-Oct 39 markings
		#314	CBF: 234	Same as above
		#314	PR134: 2	Same as above
		#325	CBCA: 19, 20	Neutrality markings
	(Wasp G.1's)	#343	AI7: 242	Caption in error: Mission was actually on 14 May 40
		#346	AI7: 242	Same as above
		#346	EN: 83	Same as above
		#346	CBF: 234	Caption in error: *4.JaVA* stationed at Bergen, not Schiphol
		#348	PR134: 2	Caption in error: 1 Jun 40 "delivery date" is after Dutch surrender; Aircraft actually at *LvB*, Ockenburg, joined *4.JaVA* on 13 May 40
	Combined JaVA (D.17) BomVA (T.5's)	#205	LW2: 5: 50	On 13 May 40 attack on Grebbe Line
		#850	AN: 748	Caption in error: Says it's aircraft "856"
		#850	KL: 20 ML7: 5: 149	Neutrality markings. Fine action painting of 11 May 40
		#851	AN: 748	Pre-Oct 39 markings
		#852	HE: 165	Black/White tone drawings; Pre-Oct 39 markings
		#852	S#9: 79	B/W line drawings
		#855	BA9: 29	May 1940 markings.
		#856	AA5: 8	B/W line drawings, No camouflage depicted
		#856	LW2: 5: 48	On 13 May 40 attack on Moerdijk bridges
	StratVerVA (C.10's)	#712	VT: 94	On 13 May 40 attack on Grebbe Line
		#713	ML7: 5: 148	On 11 May 40, Strafing Ju52s on

		#714	BA9: 32	Valkenburg beach. May 1940 markings.
		#713, #714, #715	LW2: 5: Cover	On 10 May 40 attack on Valkenburg airfield
		#718	HE: 155	Black/White tone drawings; Pre-Oct 39 markings
2.LvR	III-2.LvR (C.5d)	#631	PR87: 11	Scrap view Neutrality markings
	IV-2.LvR (C.5d)	#603	AE53: 64	Pre-Oct 39 markings Assigned to *IV-2.LvR* from *Vlgschl Haamstede* on afternoon of 10 May.
		#614	BA9: 32	May 1940 markings.
	1-V-2 (D.21)	#215	D21: 22, 23	Pre-Oct 39 markings
	3-V-2 LvR (DB-8A/3N)	#384	ML7: 5:149	Depicted 10 May 40 combat with Bf.110s
		#388	BA9: 32	May 1940 markings.

Marine Luchtvaart Dienst Aircraft

Unit	Type	Aircraft Profiled	Publication	Remarks
GVT.2	T.8W	"R-1"	CBCA: 21, 22	Pre-Oct 39 markings
		"R-1"	PR176:2	Neutrality markings
		"R-5"	PR176:10	Pre-Oct 39 markings
GVT.4	T.8W	"R-6"	AE#20:64	Neutrality markings
		"R-6"	BA9: 65	Neutrality markings
		"R-6"	PR176:10	Neutrality markings Caption in error: Says delivered to MLD on 10 May 40
Trainers	C.7W	"L-17"	HE: 150	Pre-Oct 39 markings
		"L-2"	BA9: 68	Neutrality markings
	C.14W	"F-19"	HE: 161	Pre-Oct 39 markings
		"F-7"	BA9: 66	Neutrality markings
	S.9	"S-20"	HE: 169	Pre-Oct 39 markings
		"S-27"	BA9: 66	Neutrality markings

Sources:
AA5 = "Fokker T.V" by Alfred Damen, Aero Album, Vol 5, Spring 1969.

AE# = Air Enthusiast, Issue number: page number
AI# = Air International, Volume number: page number.
AN = Aviation News magazine: page number.
BA9 = Batailles Aeriennes No.9, La Campagne des Pays-Bas, by Michel Ledet, 1999, Sarl Lela Presse, Outreau, France : page number.
D21 = Fokker D-XXI: Dutch & Danish Service, by Warren Eberspacher, St Paul, MN: Phalanx Publishing Co., Ltd., 1994.
CBCA = The Complete Book of World War II Combat Aircraft 1933 – 1945, Enzo Angelucci and Paolo Matricardi, New York: Military Press, 1988.
CBF = The Complete Book of Fighters, by William Green and Gordon Swanborough, London: Salamander Books Limited, 1994.
CK = De geschiedenis van CAMOUFLAGE EN KENTEKENS op vliegtuigen van de Nederlandse Strijdkrachten, J.H.N. Greuter, Bergen, NL: B.V. Bonneville, 1997.
EN = Encyclopedia of Air Warfare, ed. Iain Parsons, New York: Thomas Y. Crowell Co., 1975: page number.
HE = Fokker—The Man and The Aircraft, by Henri Hegener, Letchworth, UK: Harleyford Publications Limited, 1961.
KL = Klu vliegtuigen, by Wim Schoenmaker and Thijs Postma, Alkmaar, NL: De Alk bv, 1987.
LW# = Luchtvaart Wereld, Volume number: Issue number: page number.
ML# = Maandblad Luchtvaart, Volume number: Issue number: page number.
MU = Fighters 1939 - 1945, by Kenneth Munson, New York: The MacMillan Company, 1969.
NVE12 = Nederlandse Vliegtuig Encyclopedie, No. 12 Fokker G-1, by Hugo Hooftman, Bennekom. Cockpit-Uitgeverij, 1981.
PR63 = Profile Number 63—Fokker D.XXI, by G. H. Kamphuis, Leatherhead, UK: Profile Publications Ltd, 1966.
PR134 = Profile Number 134—The Fokker G.I, by Bart van der Klaauw, Leatherhead, UK: Profile Publications Ltd., 1966.
S# = SAFO, Issue number: page number.
VT = Vlucht door de tijd, by Kol. A.P. de Jong, Houten, NL: Unieboek b.v. 1988.
WE = Combat Aircraft of World War Two, by Elke C. Weale, John A. Weale, and Richard F. Barker. London: Bracken Books, 1977.

Originally compiled by: Doug Dildy (SAFCH #844) Albuquerque, NM (1994)
Additions/Alterations by: Frans Scheve (SAFCH #890) Almelo, the Netherlands

A great website to view Meidagen Aircraft Paintings:
http://www.thijspostmaaviation.nl

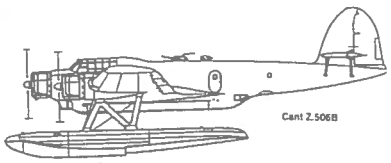
DECALS FOR MEIDAGEN '40 AIRCRAFT

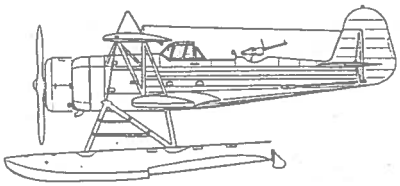
Decal Company/Sheet	Scale	Aircraft Types Covered	Reviewed
IPMS Netherlands/ Decalset 3 (1988)	1/72	All Dutch aircraft covered Markings, figures, triangles	Unknown
Dutch Decal/72023	1/72	Orange triangles for DB-8A, Fokker T.5, Bu133, Fw58	S17: 128
Dutch Decal/72030	1/72	Orange triangles for Fokker D.21 and G.1	S94: 64
Dutch Decal/72044	1/72	Orange triangles with black and white Numerals	S94: 65
Dutch Decal/48026	1/48	Markings for Fokker D.21	S94: 65

Webpages to locate decals:
LHShop: www.lhshop.nl
IPMS Netherlands: www.ipms.nl
DutchDecal: www.dutchdecals.nl
Note: All decals no longer in production.

Compiled by: Frans Scheve (SAFCH #890) Almelo, the Netherlands

SAFO member Gene Falada writes that he has construction drawings for flying models for some of the a/c featured in the January 2006 issue of SAFO. These include Fokker C-XI and Cant Z.506B. The C.XI is in 1/8 scale with a 64" wingspan and consists of 4 sheets (52 square feet of plans). Cost $20 plus $7 for mailing and tube. The Z.506B is 1/12 scale with a 86-1/2" wingspan and consists of 4 sheets (62 square feet of plans). Cost $30 plus $7 for mailing and tube. For more information on these plans or for a list of other available plans write: Gene Fa;ada, 22W070 Byron Ave., Addison, IL 60101-1004, USA.





Catalogue 2006 de Lela Presse. Lela Presse's 32-page catalog not only includes information on their own magazines (*Avions* and *Batailles Aeriennes*) and books [(Hors-serie: *Les Messerschmitt Bf 109 suisses* €14 plus postage, *Les Messerschmitt Bf 109 finlandais* €22 plus postage, *L'Aeronautique Militaire belge en mai-juin 1940* €14 plus postage), (Histoire de l'aviation: *La force aerienne Croate 1941-1945* €48 plus postage, *La Legion Condor* €36 plus postage),. (Profils avion: *Le.O C.30 & C.301* €45 plus postage, *Brewster Buffalo* €50 plus postage, *Le Fokker D.21* €45 plus postage)].

They also sell other series from friends of the SAFCH such as Jorge Nunez's *Monographies Argentines*, Giorgio Apostolo's *AeroFan* and *Ali d"Italia*, and Kari Stenman's *Suomen Ilmavoimien Historia*.

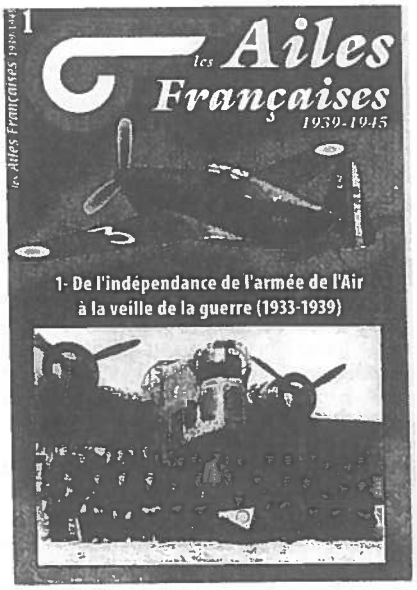
Other books of interest to SAFO readers: *Letov S-328* (Vols, 1 & 2) bilingual Czech/English (80 A-4 pages) €25 each plus postage. *Bulgarian Fighters* Vol. 1 bilingual Bulgarian/English (76 pages) €25 plus postage. *100 ans d'aviation en Belgique* €15 plus postage.

Orders, information,, or a catalog can be obtained by writing to: SARL Lela Presse, 29 rue Paul Bert, 62 230 Outreau, France. E-Mail contact@avions-bateaux.com

Les Ailes Françaises: 1939-1945 #1

De l'indépendence de l'armée de l'Air à la veille de guerre (1933-1939)

TMA SARL, 75 rue Claude Decaen, 75012 Paris, France. Email: airmagazine@wanadoo.fr



This is the first of a series of 12 quarterly issues covering French Military aviation in WWII. This premier issue consists of 96 A-4 size pages of high-quality paper bound between soft covers. The text is entirely in French text, but there is a plethora of well-reproduced photos and beautiful color side-view drawings. As the subtitle declares, this first volume covers the pre-war years from the independence of the Armee de l'Air in 1933 until the beginning of the war in 1939. The text follows the French government's ineffective responses from Hitler's occupation of the Rhineland through the Sudentland crises. Details are given for five "Plans" for modernization and expansion of the Armee de l'Air, each one more grandiose and unrealistic than the one before. This reviewer found particularly useful a table on the nationalization of the French aviation industry in 1936/37 delineating which familiar company was absorbed in the bureaucratic alphabet soup (e.g., Breguet became part of the SNCAC).

The book is profusely illustrated with photos of French aircraft of the period from the grotesque, but strangely attractive, aircraft that personify French aircraft design at the beginning of this period (e.g. LeO 20) to the effeminately elegant designs being tested at the onset of the war (e.g., Amiot 340). These photos are effectively supported with beautifully drawn color side-view drawings.

The text is, unfortunately, is entirely in French, but as the chapter heading listed below show that much information can be mined from the French text even by readers only marginally familiar with the French language.

(1) L'indépendence de l'armée de l'Air (1928-1933): 8 pages including 17 photos and 8 color side-view drawings [LeO 20 (5) and Breguet 27 (3)].

(2) Le réarmement aérien français: le Plan I (1933-1937): 13 pages including 22 photos and 15 color side-view drawings [D.500 (4), D.501, D.510 (2), Amiot 143 (2), Potez 540 (2), LeO C.30, Berliot-SPAD 510, Loire 46, & Bloch 131].

(3) Des avions pour l'Espagne (juillet 1936): 5 pages including 5 photos and 2 color side-view drawings [Bloch 210 & Loire 46].

(4) Les nationalisations des industries aéronautiques (août 1936-janvier 1937): 5 pages including one table and 6 photos.

(5) Les plans de transition (1936-1938): 13 pages including 2 tables, 19 photos and 5 color side-view drawings [D.510, Amiot 143, Potez 540 (2), & CAMS 37A].

(6) L'aviatin militaire debut 1937: l'armee de l'Air a 'l'heure des bilans: one page including one photos.

(7) La rénovation de l'aviation de bombardment: le Plan V (1938-1938): 7 pages including 2 tables, 16 photos, and 3 color side-view drawings [Potez 630, Amioit 350, & Breguet 691].

(8) La crise des Sudétes (mars-septembre 1938): 8 pages including 10 photos, and 5 color side-view drawings [Amiot 340, Loire 46 (2), Bloch 210, & Bloch 200].

(9) Appels à la l'aide étrangère (1937-2939): 11 pages including 3 table, 18 photos, and 3 color side-view drawings [Hawk 75A (2) & Koolhoven FK-58].

(10) Les exportations matériel française: This chapter is probably the most interesting for small-air-force enthusiasts. 6 pages including 9 photos and 10 color side-view drawings. [Czechoslovak MB.200 (2); Romanian MB.210, Chinese Breguet 27 & Dewoitine 510, Venezuelan Breguet 27 & Dewoitine 500; Lithuanian Dewoitine 501; Swiss Potez 632; and Yugoslav Potez 630.

(11) Le Plan V renforcé (juin 1939): .one page including one table.

(12) L'armée de l'Air avant l'entrée en guerre (juillet-août 1939): 3 pages including 3 tables, and 4 color side-view drawings [Potez 631, Bloch 200, Bloch 210, & Amiot 143].

(13) L'aviation coloniale: one pages including one table, one photos, and one color side-view drawing [Potez 25A2].

(14) L'aéronautique navele: 10 pages including one table, 18 photos, and one color side-view drawing [Levosseur PL.10].

This is a grand total of 142 photos and 57 color side-view drawings.

Fiches monographiques: Three aircraft are described, each with 2 pages including a 4-view scale drawings (MB 200 (1/144), LeO 20 (1/114), &Loire 46 (1/72).

Les Ailes Francaises 1938-1945, # 1, covers an important part of the pre-history of WWII that is pretty much neglected in the English-language aviation literature. It has always been a serious question among aviation enthusiasts why the French military aviation was so ill prepared for the Luftwaffe assault. While this book does not fill this gap in the literature, it will reward the patient reader with a better understanding of the events leading up to the debacle of Battle of France in May and April of 1940. If you're interested in this period, don't let the French text deter you from obtaining this book.

In addition to those interested in the history of the period, enthusiasts of 1930s aircraft will feast on the photos of weird and wonderful aircraft, and the modeler will find much inspiration in the color side-view drawings. In particular, the modelers of small air force aircraft will be tempted to add a Venezuelan Dewoitine 500 and Brequet 27 to their collection. [Ed: I'll never understand why Azur came out with a kit of the Breguet 27 when there is such a need for kits of Breguet 19 and Potez 25.]

The cost of the first issue (in France) is €14. A subscription (in France) is €55 for the first year. 105€ for the first two years, and €135 for numbers 2 through 12.

"Finally able to digest No.114 and found that I had a few comments to make. Friend Tony Sapienza's excellent piece on the little-known Paraguayan Navy Republic RC-3 Seabee's was most welcome. I have some additional information that seems to suggest the aircraft led a rather eventful existence, which, for the first two, commenced as early as January 1949. On 12 January 1949, one of the two then on hand sustained major damage when it alighted on the water with the wheels down. The pilot was Lt. Rene Zotti, who received a minor head wound and was hospitalized, while his three passengers suffered from minor shock only. Prior to take-off, Zotti had been showing a Naval officer riding in the co-pilot seat how to work the wheels and flaps. Calling for flaps on final approach, he got wheels instead. When the aircraft began to lose speed in the water, it nosed over. The cockpit enclosure, the prow, the two wings and the engine cowl received major damage but the engine and prop apparently survived. The aircraft had about 40 hours total time by then. It is hard to believe the aircraft was rebuilt locally and survived to the 1960s.

"On or about 9 February 1949, the other Seabee then on hand also received major damage when it dug a wing into the water after one float broke free during excessively fast taxiing. The pilot, Lt. (Res) Alberto Fragnaud, reported that he had made a forced landing on a beach following engine trouble earlier. After landing, he entered the water with the intention of taxiing the RC-3 to the Navy hydroplane base at Sajonia. When the wing tip float came off, he was unable to prevent the wing tip from going into the water. The aircraft turned over. This aircraft appears to have been repairable, but the loss of an RC-3 float was serious business that might have involved spar damage. Again, I find it hard to believe the aircraft survived until 1960. The Paraguayan Order o Battle for 1 July 1949 only showed one on hand, so perhaps this was Naval 103.

"Regarding our great friend Nick Waters Chilean Hawker Hunter drawing on page 61, J-701, every Chilean Hunter I have photos of shows the serial on the upper left wing "unswept," that is, configured the same as the national insignia if lines were drawn between the two level.

"With regard to Jorge Delgado's drawings of the Panamanian Huey on page 62, I actually photographed FAP-104 and 105 extensively in 1969 and 1970. The antenna blade on the upper cabin, forward, actually "leaned" forward, not aft, and the Indian head on the pilot door forward had the words "El Jefe" in black block letters under it. The band around the rear tail boom was NOT yellow; it was very much day-glow orange."

Dan Hagedorn (SAFCH #394), 13125 Pennerview Lane, Fairfax, VA 22033, USA

"In reference to Dan Hagedorn's comments about my article on the TNCA that appeared in SAFO Vol.29 No.1 No.113 July 2005, I would like to add some comments and observations.

"Errors were committed concerning the names of some of the aircraft mentioned in the article as Dan has pointed out, mostly from their historical reporting like per example 'Guajalote'/'El Guajalota.'

"Another error committed by the author, was to include on page 9 the reference to an Avro Anahuac being donated to Panama. This is incorrect. Only Guatemala and Costa Rica received this type of aircraft. This was part of a plan that was reported during Tte. Corl. Roberto Fierro Goodwill flight to Central America in 1928 in the Mexican built Baja California No.2. The Mexican government wanted to donate an aircraft to each country visited by the Fierro (Nicaragua not included) as some sort of a Avro diplomacy deal, like the later MiG diplomacy used by the former Soviet Union in Africa and the Middle East.

"In reference to the Huntington Biplane (page10 Table 4) later to be know as the "Biplano Militar #3, later TNCA 1-F-6. I have found two references made to the Nieuport design as mentioned in an *Aerial Age Weekly*, May 24, 1915, article, 'The Huntington Tractor Biplane" by Walter H. Phipps that mentions the following: 'Huntington tractor Scout an exceptionally efficient machine with a 80 h.p. Gyro motor. Adaptation of the efficient Nieuport fuselage, with an improved landing gear, to biplane wings.' Another reference is in the magazine *Aeronautics* Vol. XVI No.12 March 30, 1915 page 25, 'The Huntington Passenger Biplane' that said the following: 'In this, biplane wings have been combined with a Nieuport type fuselage which has been refined considerably'. It must be remembered, that many American aircraft designers were taking some French design ideas into their designs, like Harold Kantner and his monoplanes designs.

"As for the issue of the TNCA Serie A biplanes for El Salvador, it is the author opinion that two Serie A's; were sent, one flyable and the other as a spare part source. But the problem is when all the already-built aircraft received the new TNCA serial numbers, some confusion resulted.. The inventory list of May 7th 1919 list two Serie A biplanes to El Salvador: Biplano 2-A-13 (sic) Regalado a la Republica del Salvador and 2-A-14 (sic) Regalado a la Republica del Salvador. While another source states that 'Biplano Militar Tandem No.1' was later numbered 2-A-9. This aircraft, known as the 'la Biplana', with a Gnome 80 hp engine was delivered as a gift to El Salvador. (Other sources list this aircraft as TNCA 1-A-9). While photo #6 on page 36 shows the Serie A that was given as a gift to El Salvador with the number '1' painted on the fuselage and equipped with a 80 hp Anzani engine, the same book, written by Medardo Cordova, later list this aircraft with a Gnome rotary 80 hp engine. The manuscript written by Ing. Lascurain, on pag.28, mentions two aircraft sent to El Salvador, one aircraft equipped with a 50 hp Gnome engine.

"Concerning the Serie H Parasol 5H57, this aircraft was listed by historian Manuel Ruiz Romero, with an Aztlalt 80 H.P. engine and in service in March 1919.

"In reference Parasol H serial 12H63 and 13H64, my listing of known Serie H serials does not list neither of these aircraft nor do it make any reference to them even in the diary of operations in the North of Mexico of 1919. My sources list that 15 were built before the construction of these types of aircraft were suspended in 1920. And, in September 1921 all Serie A and Serie H were retired from the service per order of the chief of the air service. The highest number I have on the Serie H is 10H69, which was lost in accident on September 28, 1920.

"As for TNCA 1-C-73,this was another omission by the author, this Curtiss Jenny was reported lost on September 5, 1921, with the death of both pilots at Balbuena airfield.

"As for TNCA 2-D-80, Italian experts have pointed out that this aircraft is an Ansaldo A-300 series, and tragically this aircraft was also lost with the death of its two crew members during the De La Huertista Rebellion

"As for 4E133, I don't have any information on this aircraft. The only aircraft closely listed are 8E133 Monoplane 'Mexico' and 41A133 Avro Anahuac. Could this be 4E131 Quetzalcoatl Serie I lost on Dec 23, 1923 and equipped with a German BMW engine probably a 185 hp.

"On the highest numbered Avro 95A192, I don't have any information on this particular aircraft and based on my list I can suggest that 89A-???. It could be No.196 ,but I have nothing to back it up.

"Any additional information would be most welcomed on this matter."

Santiago A. Flores (SAFCH #), 2047-A Cerrissa Ct., San Diego CA. 92154-1275. E-mail: floresbgkiddo@cox.net

"I noticed in the review of the Bulldog/Gauntlet book that you commented that there were no models of the Gauntlet. This is not quite correct. Here's a scan of the box top of my 1/72-scale Aeroclub Gauntlet. It's a typical limited-run kit that is not for the beginner."

John Vitkus (SAFCH #1279). vitkusj@adelphia.net



[Edit: Also commenting on the Aeroclub kit of the Gauntlet was Alex Crawford (author of the Bulldog/Gauntlet book reviewed in SAFO #115) who sent the kit for your editor's collection. Thanks Alex. I'll see if I have enough aptitude to finish this kit in Danish markings.]

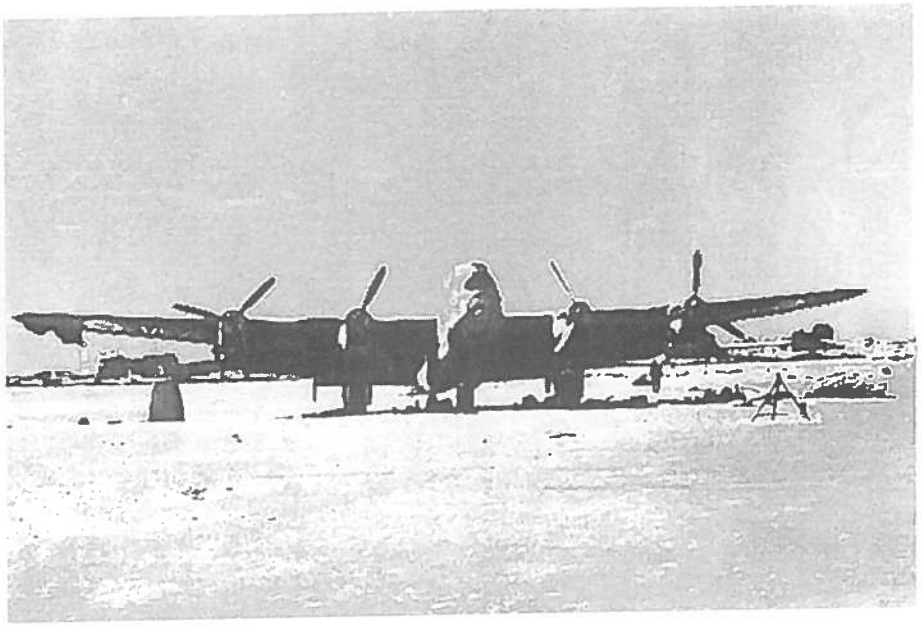
"On 30 December 2005, the Polish Air Force took over the NATO task of policing the airspace over the three Baltic countries of Estonia, Latvia, and Lithuania. In due time the Polish contingent will be replaced by Turkish fighters. In the meantime, the four Polish Mig-29 fighters are based in Zokniai, Lithuania."

Kai Willadsen (SAFCH #863), E-mail: kai.willadsen@ofit.dk

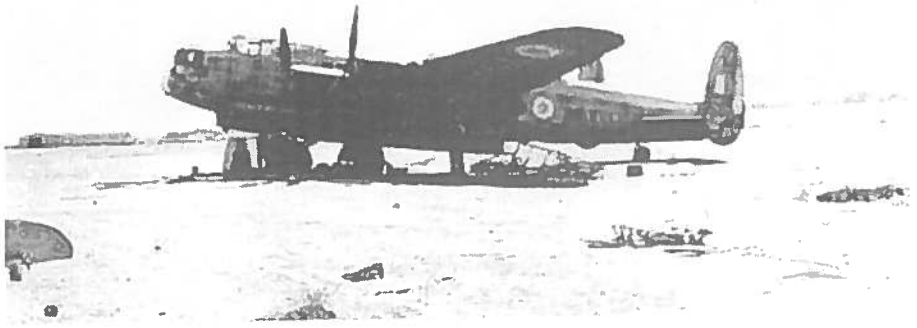
"Seeing the cover photo of SAFO Vol 26 #1 April 2002 sporting the bizarre 921-V by Anton Flettner, I remembered I had seen this thing somewhere else! The late German aviation magazine Luftfahrt International No 22 (July-August 1977) dealt with this in an article titled ' Flugzeuge mit Walzenflügel' in very detail with huge reference list.

"By the way, this machine did not perform well according to this article. During the first attempt to take off, a height of two meters was obtained and then the aircraft overturned and crashed. Main problem was the disturbed airflow caused by the rotating wings preventing controlled flying."

Pentti Manninen (SAFCH #973), Jalomaentie 8bC 300, FIN-00770 Helsinki, Finland. E-Mail: inscale72production@luukku.com



Royal Egyptian Air Force Lancasters



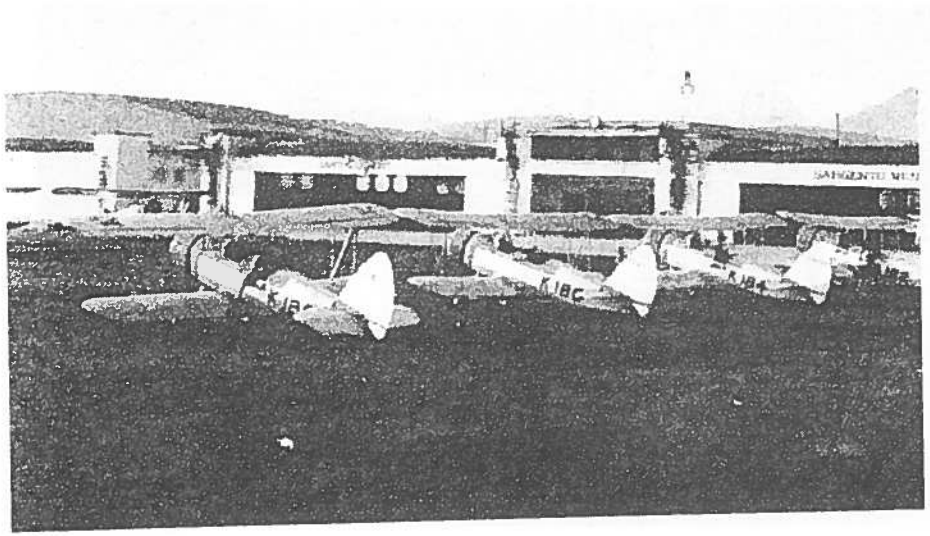
See page 130 for the article



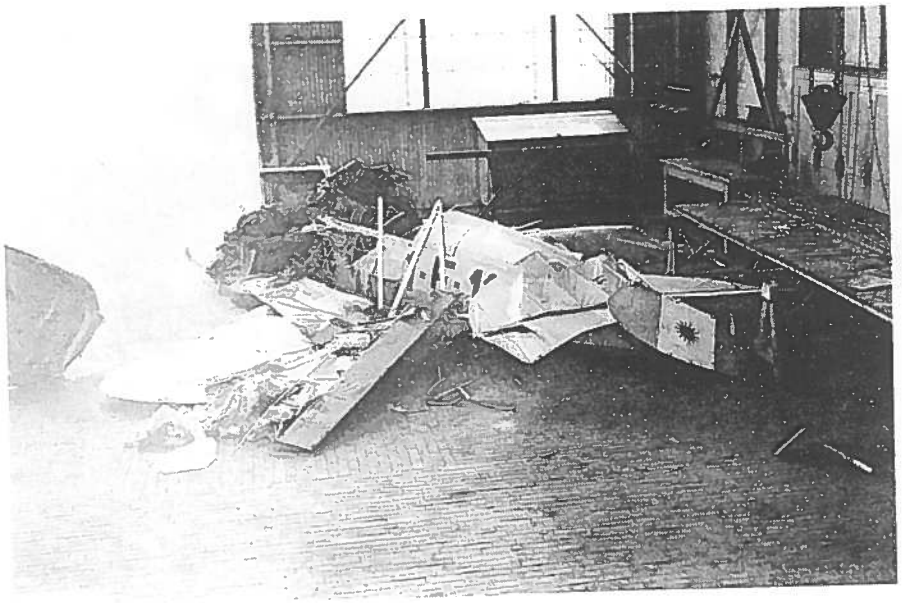
A



B



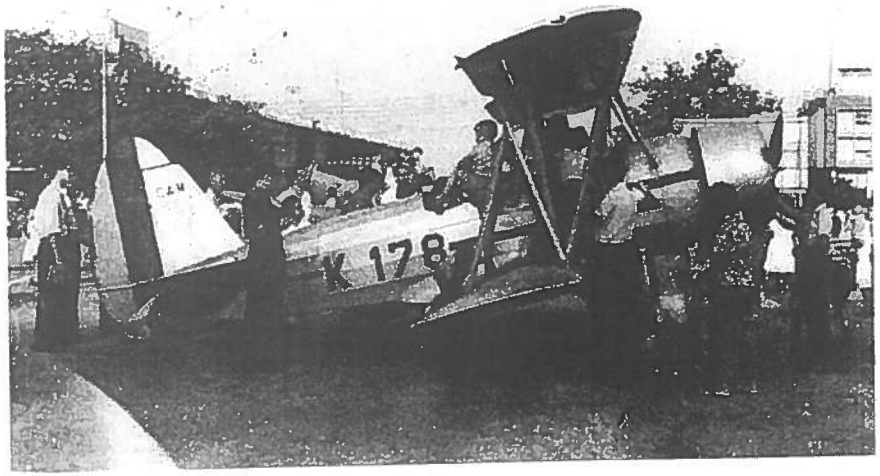
C



D



E



F